DOCUMENT RESUME

ED 312 501 CE 053 668

AUTHOR Camp, William G.; Heath, Betty
TITLE On Becoming a Teacher: Vocational Education and the Induction Process.
INSTITUTION National Center for Research in Vocational Education, Berkeley, CA.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE Dec 88
GRANT V051A80004-88A
NOTE 119p.; Based on papers presented at the Annual Meeting of the American Vocational Education Research Association (St. Louis, MO, December 3, 1988).
AVAILABLE FROM NCRVE Materials Distribution Service, 46 Horrabin Hall, Western Illinois University, Macomb, IL 61455 (Order No. MDS-018: $6.25).
PUB TYPE Reports - Research/Technical (143) -- Collected Works - Conference Proceedings (021)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Beginning Teachers; Interpersonal Relationship; Interprofessional Relationship; *Mentors; Professional Development; School Orientation; Significant Others; Staff Orientation; *Teacher Education; *Teacher Orientation; *Teacher Supervision; Vocational Education; *Vocational Education Teachers

ABSTRACT

The product of a research symposium on the induction process for beginning vocational teachers, this document contains the following papers: (1) "On Becoming a Teacher" (William G. Camp, Betty Heath); (2) "Overview of Beginning-Teacher Induction Process" (Randol G. Waters); (3) "Mentoring as a Component of Induction" (Julie M. Johnson); (4) "Certification Patterns and Vocational Teacher Induction" (Maynard J. Iverson, et al.); (5) "Induction Needs of Professionally Trained Beginning Vocational Teachers" (Betty Heath, et al.); (6) "Induction Needs of Beginning Vocational Teachers without Teacher Education Degrees" (John L. Scott); (7) "First-Year Teacher Assistance Programs" (Barbara J. Malpiedi); and (8) "Structuring the Induction Process for Beginning Vocational Teachers" (William G. Camp, Betty Heath). (CML)

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ON BECOMING A TEACHER: VOCATIONAL EDUCATION AND THE INDUCTION PROCESS

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Supported by
The Office of Vocational and Adult Education,
U.S. Department of Education

December, 1988

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FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education
Grant Number:	V051A80004-88A
Act under which Funds Administered:	Carl D. Perkins Vocational Education Act P. L. 98-524
Source of Grant:	Office of Vocational and Adult Education U.S. Department of Education Washington, D.C. 20202
Grantee:	The Regents of the University of California c/o The National Center for Research in Vocational Education 2150 Shattuck Avenue, Suite 600 Berkeley, CA 94704-1306
Director:	Charles S. Benson
Disclaimer:	This publication was prepared pursuant to a grant with the Office of Vocational and Adult Education, U.S. Department of Education. Grantees undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view of opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.
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EXECUTIVE SUMMARY

The revitalization of vocational education in America is a primary goal of the National Center for Research in Vocational Education (NCRVE). An effective instructional faculty is essential if such a revitalization is to take place. The development of effective teachers takes place in three basic phases: preservice education, induction into the profession, and through ongoing professional development.

This monograph addresses the induction process for beginning vocational teachers. It is based on papers presented in a national research symposium held on December 3, 1988, at St. Louis, Missouri. The symposium was held in conjunction with the annual meeting of the American Vocational Education Research Association.

Description of Chapters

On Becoming a Teacher.

This chapter describes the context for the monograph and for the symposium on which it is based, outlines the overall NCRVE research project of which both the monograph and the symposium are parts, and discusses some of the other aspects of the project.

Overview of Beginning-Teacher Induction Process.

The induction process, as generally described in educational literature, is a long-term, developmental process. This chapter provides an overview of the literature on teacher induction, with particular emphasis on vocational education.

Mentoring as a Component of Induction.

This chapter describes the process of mentoring as one component of the induction process.

Certification Patterns and Vocational Teacher Induction.

The effect of certification patterns and requirements on teacher education and teacher professional development can hardly be overstated. This chapter examines a number of certification patterns for vocational teachers.

Induction Needs of Professionally Trained Beginning Vocational Teachers.

This chapter examines the inservice and assistance needs of those novice vocational education teachers who have completed professional teacher education programs.

Induction Needs of Beginning Vocational Teachers Without Teacher Education Degrees.

This chapter addresses the induction problems and needs of beginning vocational teachers who enter teaching (1) directly from the trades, business, or industry or (2) through alternative certification programs.

First-Year Teacher Assistance Programs.

There are a number of beginning vocational teacher assistance programs in existence in various states. This chapter describes the purposes, operations, and results of some of those programs.

Structuring the Induction Process for Beginning Vocational Teachers.

This chapter proposes a comprehensive program of assessment, assistance, support, mentoring, and continuing professional development as a structured approach to the induction of beginning vocational teachers.

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ON BECOMING A TEACHER

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The revitalization of vocational education in America is a primary goal of the National Center for Research in Vocational Education (NCRVE). An effective instructional faculty is a prime requisite if this revitalization is to take place. The development of effective teachers takes place in three phases: preservice education, induction into the profession, and ongoing professional development. The overall process can be thought of as a continuum of the professional development of teachers, extending from the initial decision to consider teaching as a profession to the conclusion of a teaching career.

Any comprehensive program aimed at the improvement of vocational education in America must address all three phases of the teacher professional development process. It is the purpose of this monograph to address the induction process for beginning vocational teachers as a part of that continuum.

Need for the Monograph

Once more, educational reform has become a national priority. Indeed, many members of the profession believe that there has seldom been a time in our national history when the opportunities—even demands—for educational reform and improvement have been stronger than they have been for the past five years. It is incumbent upon researchers in vocational education, therefore, to examine areas in the profession which show promise of meaningful improvement in the vocational education delivery system.

Obviously, a critical element of that system is the teaching faculty. The recruitment, selection, and professional development of the very best teachers for vocational education should be a primary goal of the profession.

One aspect of teacher professional development which appears to show much promise in improving the quality of the profession, yet has received little attention, is the induction process for beginning vocational teachers. The professional literature in non-vocational education is replete with research and theoretical discussions of the induction process, but the unique induction problems and needs of vocational education teachers have received little systematic attention.

The Context

NCRVE initially identified six priority issue areas, one of which is the development of personnel in vocational education. Clearly, the professional development of teachers for vocational education programs at all levels must be a priority in that area of research.

The ultimate problem to be addressed is how to improve the induction process for beginning vocational teachers at both secondary and postsecondary levels. The research will focus on beginning vocational teachers in four groups: (1) secondary level teacher education graduates, (2) secondary level teachers with alternative certification (i.e., college graduates without teacher education), (3) secondary level teachers whose certification is based on industry or business experience (i.e., vocational certification, as in the traditional trades and industry—T&I—model), and (4) beginning postsecondary vocational teachers. All of these groups, particularly the last two, have been largely ignored by the growing "induction" literature and research base in non-vocational education.

Specifically, the initial research will seek answers to the following questions:

1. What are the nature, dynamics, and scope of the induction process for beginning vocational teachers at the secondary level?
2. Are there differences in the induction process between beginning secondary vocational teachers entering the profession through traditional teacher education programs as opposed to those entering from alternative certification or vocational certification routes?
3. What are the nature and dynamics of the induction process for beginning vocational teachers at the postsecondary level?
4. What are the induction assistance needs of beginning secondary vocational teachers?
5. What are the induction assistance needs of beginning postsecondary vocational teachers?

This monograph is a product of the initial research for the "Vocational Teacher Professional Development Project." It is based on papers presented at a national research symposium held on December 3, 1988, in St. Louis, Missouri. The symposium was held in conjunction with the annual meeting of the American Vocational Education Research Association—an affiliate of the American Vocational Association.

Description of Chapters

On Becoming a Teacher. William G. Camp and Betty Heath, Vocational and Technical Education, Virginia Polytechnic Institute and State University.

This chapter describes the context for the monograph and for the symposium on which it is based. It outlines the overall NCRVE research project of which both the monograph and the symposium are parts. It describes some of the other aspects of the project as a promise of things to come.

Overview of the Beginning-Teacher Induction Process. Randol Waters, Agricultural Education, University of Nevada-Reno.

The induction process, as generally described in educational literature, is a long-term developmental process. It involves much more than the traditional "first-year teacher course" taught by a teacher educator, or the "orientation" meetings presented by a school administrator. A comprehensive induction program requires the collaborative effort of teacher educators, state departments of education, local education agencies, teacher organizations, and local teachers. It may involve both assessment and support functions. This chapter provides a general overview of the literature on teacher induction, with particular emphasis on vocational education.

Mentoring as a Component of Induction. Julie Johnson, Home Economics Education, University of Nebraska.

Mentoring has become a popular phrase in educational literature. Mentoring is not simply another term for a buddy system whereby a novice teacher is supervised by a senior, experienced teacher. Mentor-protegé relationships may be informal understandings, or they may be formally established agreements entailing specific functions. This chapter describes mentoring as one component of the induction process.

Certification Patterns and Vocational Teacher Induction. Maynard J. Iverson and Tracy B. Trussell, Vocational and Technical Education, University of Georgia, and Michael H. Walker, Georgia Department of Education.

Requirements for certification of teachers at the secondary level vary greatly from state to state. The effect of certification patterns and requirements on teacher education and

teacher professional development can hardly be overstated. This chapter examines a number of certification patterns for vocational teachers.

Induction Needs of Professionally Trained Beginning Vocational Teachers. Betty Heath, Marketing Education; William G. Camp, Agricultural Education; and Judith D. Barber, Induction Project, Virginia Polytechnic Institute and State University.

There have been a number of studies to identify and prioritize the needs of beginning vocational teachers. This chapter examines the inservice and assistance needs of those novice vocational education teachers such as traditional beginning teachers who have completed professional teacher education programs.

Induction Needs of Beginning Vocational Teachers Without Teacher Education Degrees. John Scott, Trades and Industry Education, University of Georgia.

A difficult situation faces the beginning vocational teacher who enters teaching directly from the trades, business, or industry. Trades and industry teachers typically fall into this category. In addition, there is an emerging tendency in many states to implement alternative certification programs for degreed beginning teachers without teacher education backgrounds. This chapter addresses the induction problems and needs of both of these sets of beginning teachers as distinct from those teachers who have completed teacher education programs.

First-Year Teacher Assistance Programs. Barbara J. Malpiedi, Occupational Education, North Carolina State University.

There are a number of beginning vocational teacher assistance programs in existence. In some instances the programs involve school-based mentoring. In others, university-based coursework or workshops are involved. As a rule they are part of larger programs for general education, but there are exceptions. Two vocational education programs that involve more comprehensive approaches have been developed for beginning agriculture teachers in North Carolina and in Ohio. This chapter describes the purposes, operations, and results of those programs.

Structuring the Induction Process for Beginning Vocational Teachers. William G. Camp and Betty Heath, Vocational and Technical Education, Virginia Polytechnic Institute and State University.

This chapter presents a proposed model for a professional development system to assist in the induction of beginning vocational education teachers. The model is appropriate for teacher education graduates, non-teacher education college graduates, and non-degreed beginning teachers. The model involves a comprehensive program of assessment, assistance, support, mentoring, and continuing professional development.

OVERVIEW OF BEGINNING-TEACHER INDUCTION PROCESS

Randol G. Waters
University of Nevada-Reno

Kerry Anderson looked out and observed her first class of freshman agriculture students at 9:15 on her first day of school. As she glanced across the room, she noticed that three students were busily whispering in the back row. A rather tall, unsociable-looking young man entered the room, five minutes after the tardy bell, and proceeded to the water fountain without comment. The rest of the class appeared normal enough. It appeared to be a mixture of boys and girls, representing various ethnic backgrounds. One young girl, sitting alone, appeared to be very frightened—was she in the right room?

On the podium in front of the young teacher were her notes and a list of first-day duties she had been trying to understand ever since her principal gave them to her during the fifteen-minute faculty meeting earlier that morning. Every desk was now full and the student at the water fountain still hadn't made any effort to sit down. Every student eye had turned toward her.

Suddenly she felt alone. She was more than 250 miles from the comfort of her college classroom. Her last courses in program design and lesson planning seemed as if they were three years in the distance rather than two months ago when she finished her student teaching and joined the ranks of "professional teachers." Although she had spent the last three weeks working on her course of study and designing lesson plans that were based upon the community description left in her files by the previous teacher, she felt unnerved. She suddenly realized she knew absolutely nothing about the students before her. Was the fellow at the water fountain ever going to sit down? Why was he smiling so strangely at her? Suddenly she had the urge to walk out of the room and keep walking. Why had she ever thought she wanted to teach anyway?

If this scenario doesn't sound familiar, it should. According to numerous studies about beginning teachers, Kerry Anderson could represent most of the new teachers entering the profession each year. Of course we know that she couldn't have come from "our" teacher education programs because "we" covered every one of the situations she was experiencing. A well-trained teacher wouldn't experience anything like this. Besides, "our" teachers are hired two months before school begins so they can be ready for the first day long before it takes place.

A Concerns Theory About Teaching

When reviewing recent teacher education literature, it becomes readily apparent that a serious concern exists regarding the qualifications of beginning teachers currently

entering our classrooms. It appears that they may need more formal assistance than teachers who graduated in earlier years (Gardner, 1983; Griffin et al., 1983). Since the early 1950s, many educators have expressed dismay at the lack of practical classroom experience provided in typical undergraduate teacher education programs (Elias, Fisher, and Simon, 1980). Students choosing education as a profession are entering into preparation for their career with less life experience and practical knowledge than any group of young teachers before them.

Some studies suggest that good teachers may choose other professions shortly after their first years on the job. Jensen (1986) reports that nationally 15% of new teachers leave the profession after the first year, and 50% will leave within six years. In his study of Pennsylvania vocational agriculture teachers, Curtis (1985) found that teachers having five years or less of experience were also the most likely to leave the profession. An even more negative finding, reported by Weaver (1980, cited in Dunleavy, Ferguson, Pastel, Pleasants, & Washenberger, 1983) is that those most qualified to teach never enter the field.

If our teacher preparation programs are founded upon a sound theoretical basis in the practice of pedagogy, why then do we find so many young teachers experiencing difficulties that cause them to leave their chosen profession so soon?

Certainly no single research effort could answer this question totally. However, the work of Frances Fuller (1969) is only now being recognized widely as a pioneering effort in understanding the concerns and needs of beginning teachers. Fuller and her associates at the University of Texas began working with preservice and beginning teachers in the 1960s in an effort to determine why many education students thought their undergraduate education courses were "worthless." Her studies, as well as others (Yamamato et al., 1969; Taylor, 1975), found that young preservice teachers were often not ready to learn materials they could not relate to. Teaching methodologies and planning techniques were not concerns of preservice teachers because they had not yet experienced a need for these concerns. As her studies continued, Fuller observed a developmental progression of concerns of education students and teachers through three major phases. She identified these phases as *self*, *task*, and *impact* concerns, respectively.

Fuller found that young teachers who had just finished their undergraduate programs and had little teaching experience were actually not yet concerned about teaching. These teachers did not relate to the specific tasks involved in teaching, so they were unable to anticipate the problems and frustrations they would have. They did have concerns, however, mostly about *self*. They were concerned about whether they could succeed in

teaching. They wanted their students to perform well, but their desire was based primarily on their own need to experience personal success in the classroom.

After some experience in the classroom, teachers were still concerned about themselves. However, they were now concerned with themselves as teachers and their ability to manage the *tasks* involved in teaching. They had gained some confidence in their ability to succeed in the classroom, and they were now ready to explore alternative teaching strategies and more efficient ways of performing the tasks associated with teaching.

Finally, Fuller found that teachers who had resolved their concerns about themselves and their tasks became concerned about their impact or effect upon students. They were concerned whether students were getting the preparation they needed to become useful members of society after graduation. Teachers were now concerned about individual students and individual learning needs.

At first, teacher educators tended to take issue with Fuller's suggestion that teachers were not concerned about their impact upon students until after other concerns were met. However, more recent studies by McNergney (1977) and Ingersoll (1975) have supported the hypothesis that teachers' concerns progress through these three phases. Although little has been done to determine the concerns of vocational teachers specifically, Waters (1985) used the Teacher Concerns Questionnaire developed by George (1978), an associate of Fuller's, to assess the concerns of a sample of sixty-five teachers of agriculture in Illinois, Indiana, Kentucky, New Hampshire, New York, Pennsylvania, Tennessee, and Wisconsin and found that teachers of vocational agriculture appear to progress through professional development stages quite similar to those identified by Fuller. Considerable research has been done on the specifications of these concerns, and progress has been made in measuring them. However, very little has been done to suggest specific content from the various disciplines to help teachers move through the phases more rapidly.

The conclusion, then, is that although preservice teachers certainly need a foundation in good teaching methodology and program planning prior to graduating, there is no assurance that this foundation will be adequate training to provide them with a basis for surviving during their first few years of teaching. Based upon Fuller's Concerns Theory, we may conclude that young teachers need a different type of assistance in order to move successfully to the higher stages of their professional careers.

Studies Of Teacher Induction

Much has been written in the last decade on the topic of teacher induction. Two major studies of the teacher induction process were conducted through the early and mid-1980s, one by the Educational Testing Service (ETS) in Princeton, New Jersey, and another by the Research and Development Center for Teacher Education at the University of Texas at Austin. Both of these studies have added greatly to the literature associated with the process of teacher induction.

The ETS study had as its major purpose the answers to three guiding questions:

1. What are the problems of beginning teachers?
2. What kinds of programs have facilitated the solution of these problems?
3. What are the consequences of failing to solve these problems in terms of achieving teacher effectiveness and stimulating a career of progressive professional development? (McDonald, 1980)

The following were the main goals of the University of Texas study:

1. Identify needs of beginning teachers.
2. Develop and implement a model teacher induction program designed to meet those needs.
3. Assess the effects of the model program on new teachers in a school setting.
4. Inform the teacher education community about the program.
5. Study the subsequent adoption of the program in other settings.
6. Produce user-oriented staff development resources for those working with new teachers. (Barnes & Huling-Austin, 1984)

Both of these studies did an excellent job of identifying the needs of beginning teachers and focusing the attention of teacher educators on planning programs based upon those needs.

The purpose of this chapter is to present an overview of the literature relating to the needs of beginning teachers, as well as to provide a brief view of some of the programs that have been developed to meet those needs.

Needs Of Beginning Teachers

The needs of beginning teachers have been documented in numerous ways. The book *Don't Smile Until Christmas* by Kevin Ryan (cited in Elias, Fisher, & Simon, 1980) is a compilation of diaries of new teachers. It iterates "simple survival and terror" as a normal way of life for the novice. Elias, Fisher, and Simon identify numerous studies that suggest discipline and class control issues, the ability to find and use appropriate materials,

evaluation of student work, and concerns for isolation and insecurity as other major problems mentioned by beginning teachers. In their review of literature, Johnson and Ryan (cited in Barnes & Huling-Austin, 1984) found similar problems such as planning and organizing, evaluation of student work, motivation of students, and adjustment to the teaching environment as major needs of beginning teachers.

Although seldom mentioning Fuller's work, almost all of these studies would concur with her findings. That is, as students first move from the safety of "being taught" to "being teachers," their first needs are those of security and a feeling that they can be successful in the classroom. These needs may best be met by employing good individual supervision strategies that provide positive reinforcement and constructive criticism. Only after young teachers have developed confidence and an assurance of survival can they begin to refocus upon the tasks associated with improving their teaching techniques.

The Practice Of Induction: Differing Opinions and Perspectives

Most of the teacher induction programs grew out of a concern for the lack of practical experience in the traditional teacher education programs. Those who argued most for teacher induction programs were concerned that a student teaching program was nothing more than "role playing with sympathetic guidance" (Elias, Fisher and Simon, 1980, p. 5). Although most of the literature associated with teacher induction in the United States began to appear in the 1950s after the Ford Foundation took interest in the serious teacher shortages of that time, a number of intern programs existed at colleges such as Brown University as early as 1809 (Elias, Fisher, and Simon).

Past and current induction programs appear to differ significantly depending upon who has been involved in planning them. McDonald (1980) identified four specific groups of individuals who all go through the induction process themselves but who have different perspectives as to the focus of induction programs. According to McDonald, *teacher educators* tend to focus upon what is the ideal in teaching. They attempt to help young teachers become as much like ideal "models" as possible. *Practicing experienced teachers*, on the other hand, tend to identify the need to deal with some of the same problems they dealt with as young teachers. However, they tend to focus on school policy and methods for dealing with such problems as the procedure for sending someone to the office for disciplining and the procedure for ordering new materials through the district office.

School administrators tend to develop programs that help young teachers address effectively the needs of the school district. For example, a school district may have recently adopted a new standardized curriculum. The emphasis of its beginning teacher induction program will likely be on how the *new teacher* might best teach that curriculum. Finally, the perspective of the new teachers themselves tends to be extremely narrow. According to McDonald, beginning teachers are immersed in a set of rapidly changing events they do not fully understand. He stated, "They are unsure of their ability to control these events though they know that failure to control them will inevitably have serious consequences for them (p. 56)." They tend to seek simple solutions to day-to-day problems as they arise.

Andrews (1986) further found that the curricular organization of most induction programs in the United States had as their major emphasis the accomplishment of rather specific selected competencies. Unlike similar programs in Great Britain which were focused on subject emphasis and teacher cognitive and affective development, they tended to focus more on demonstrated instructional and practice skills.

Model Program Descriptions

Elias, McDonald, Stevenson, Simon, and Fisher (1980) identified a large number of induction programs currently in operation and categorized them based upon the different groups who were primarily responsible for conducting them. Although obviously not all-inclusive, these model programs embody the elements of many such programs that are becoming more and more commonly found across the country[1].

College Models

Allegheny College in Meadville, Pennsylvania, offers a fifth-year program to young teachers who have a bachelor's degree in education that eventually leads to a Master of Arts in Education degree. Candidates may currently be employed in a school district prior to enrolling; if not, the college will place them in nonpaying assignments for a year. The emphasis in the program is on blending theory and practice, for providing maximum rather

[1]These program descriptions were selected from a much more comprehensive list developed by Patricia Elias and her associates as part of the comprehensive study of induction programs for beginning teachers conducted by the Educational Testing Service in Princeton, New Jersey. I wish to acknowledge their contribution.

Table 1

Five Induction Paradigms **(from Andrews, 1986, p. 15)**

	Paradigm	General Characteristics
1.	Laissez faire	Absence of formal programming Minimal mentor-protegé relationship Beginning teacher and staff development not a high priority
2.	Collegial	Informal supervisory relationships with experienced colleague Inservice activities provided for both participants No assessment component enters into this supervisory relationship
3.	Formalized mentor protegé	Formalized contractual relationship of beginning teacher with experienced colleague Comprehensive inservice activities provided for both participants Beginning teacher evolves through a continuum from dependency on the mentor to professional independence An assessment component is part of the mentor's role
4.	Mandated competency-based	Mandated performance-based competency programs Probationary status of beginning teacher is emphasized Major financial and legislative support is afforded Well monitored and evaluated
5.	Self-directed professional	Self-directing contract format May combine elements of paradigms 2, 3, and 4 Mentor provides collaborative support Beginning of ongoing professional development plan

than minimum competencies. Both employed and placed students work with college faculty on specific competencies.

Claremont Graduate School in Claremont, California, has developed an internship program with an emphasis on the integration of theory and practice. The program is reported to be highly individualized and is strongly based on supervisory support during the teaching year. Prior to the teaching experience, a curriculum is specifically designed to be responsive to state mandates for certification related to reading instruction and mainstreaming of special students.

Seattle Pacific University in Seattle, Washington, provides a fifth-year internship program for students currently holding a bachelor's degree. According to program staff, the participants take required educational foundation courses early in their sophomore year and are placed in a school laboratory experience prior to their internship. After completion of core course requirements, students are placed in yearlong internships and are visited once a week by a university supervisor.

Northwest Nazarene College in Nampa, Idaho, offers a first-year intern cooperative graduate program. Although initially offered during the senior year, it was changed to a first-year teaching internship when it was discovered that seniors were not ready for total classroom responsibility. The program is reported to be highly individualized, requiring intern interaction with master teachers, college supervisors, and other interns. Although no formal coursework is required during the intern year, interns participate in weekly seminars that focus on their problems and experiences.

School District Models

The Houston Independent School District of Houston, Texas, designed a program for new teachers that utilizes "teacher facilitators"—experienced teachers who provide intensive on-site support to new teachers. The teacher facilitators spend four days each week at their schools and one day a week working with the program director on program development.

The Lincoln Public School system in Lincoln, Nebraska, utilizes an extensive orientation program that introduces new teachers to the city and explains personnel policies and benefits. New teachers are introduced to "helping teachers" who will be visiting them a minimum of three times a year. The helping teacher is an experienced teacher who is in the same discipline as the new teacher. New teachers also receive a monthly newsletter with new ideas and materials available for their use.

The New Orleans, Louisiana, Public School system conducts a program for all beginning and nontenured teachers that focuses on the use of "teacher advocates." Teacher advocates are experienced teachers who have received special training to help them identify the problems and needs of new teachers. This program appears to be quite similar to the Houston model.

A Statewide "Mandated" Model

The Georgia Department of Education utilizes a performance-based certification program that is both a training program and an assessment program. Based upon a standard set of performance expectations, it provides continuing inservice training to beginning teachers through their initial years of employment. Beginning teachers are tested for minimum competence prior to entering the profession.

Collaborative Models

Elias, McDonald, Stevenson, Simon, and Fisher have identified a number of programs which they call "consortium models." These programs are collaboratively developed and managed by more than one group such as school districts, university teacher education programs, state departments of education, and private foundations. Further review of the literature suggests that these collaborative models are becoming more common (ERIC Clearinghouse on Teacher Education, 1986a; Kansas State Department of Education, 1985; Dunifon, 1985; McNair, Timberlake, Hines, & Reiman, 1987).

Three universities in Arizona, the Globe Public School System, the Gila County Superintendent's Office, and the Arizona Department of Education are working cooperatively on a federally funded project that is attempting to implement a "teaching residency program" similar to the medical residency program currently in place for medical students in the state. The program utilizes jointly hired staff who have appointments with both the university and the county school system.

Two university teacher education programs in Wisconsin are currently cooperating with local school districts on a transitional year for beginning teachers. The program emphasizes the correlation between the theoretical concepts for the teaching and learning process and their practical application. Teachers are hired with flexible teaching loads, and salary is adjusted according to the salary scale in the hiring district. Ongoing inservice assistance is offered to the teachers throughout the year by university faculty (Elias, McDonald, Stevenson, Simon, and Fisher, 1980).

Another study conducted by the Holmes Group and the University of Texas at Austin (1986) identified significant increases in the numbers of beginning-teacher induction programs. In their directory of teacher induction programs, they identified six public school systems, three intermediate education units, twenty-nine colleges and universities, six state departments of education, and three national professional associations that were actively involved in formal beginning-teacher induction programs similar to those described by Elias, McDonald, Stevenson, Simon, and Fisher.

Impact of Beginning-Teacher Induction Programs

Although the literature supporting the need for beginning-teacher induction programs is abundant, the associated research that could be used to prove their effectiveness is extremely limited. According to an ERIC Clearinghouse Digest on current developments in teacher induction programs (1986b), "other than the subjective feedback of induction program participants, few studies exist to document the actual impact of the programs upon teachers or students" (p. 7). The clearinghouse document says there is an overwhelming demand for research on induction programs related to outcomes.

Hoffman, Griffin, Edwards, Paulissen, O'Neal, Barnes, & Verstegen (1985) found in their study of state-mandated programs that the catch phrase "Research says" was terribly overgeneralized in literature associated with these programs. As an example of what they refer to, the integrity and utility of trying to use findings from an induction program for a small, select group of elementary teachers to suggest new mandates in teacher preparation is highly questionable.

Zeichner (1979) examined eleven beginning-teacher education programs in the United States and described five classes of variables most often studied to determine impacts associated with them. *User satisfaction* variables that were studied (those he identified as most often used) indicate there is apparently a high degree of satisfaction with beginning-teacher induction programs on behalf of the participants. *Teacher turnover* was used as an indicator in only two of the eleven programs. Although some data suggest that these programs may favorably impact upon teacher turnover, it would appear that much more study is needed in this area, considering its obvious importance. *Teacher performance* was studied in three of the programs he examined, and there was no statistically significant evidence in any of the studies to suggest that teacher performance was better for participants in the programs. *Teacher attitudes and morale* were studied in

four of the programs. Only one in four indicated statistically significant differences in teacher attitudes and morale for those participating in the programs. Finally, *pupil performance and attitudes* were studied in only two of the eleven programs. There is no evidence in these studies to suggest that beginning-teacher induction programs have any impact upon student performance or attitude. A final category of variables that Zeichner groups loosely together as "project staff observations" appears to conclude that programs are at least sensitizing school personnel to the problems and needs of beginning teachers and that these programs are perceived to help the neophyte. However, he concurs with other researchers in concluding that it is still unclear whether beginning-teacher programs are indeed effective in their efforts to improve the situation in our public schools.

Summary and Conclusions

The literature relating to teacher preparation indicates that there is a serious need to assist new teachers more adequately as they experience their first few years in the profession. Research indicates that beginning teachers are more likely to leave their jobs during their first few years than at any time thereafter. Although most educators agree that preservice teachers need a good foundation in educational theory and planning, it is currently more commonly accepted that this foundation will not be adequate enough to allow many beginning teachers to survive during their first few years of teaching. Based upon Fuller's Concerns Theory, it is logical to conclude that beginners are more concerned with self-survival than the typical educational theory and program planning strategies that are often addressed in teacher education programs just prior to graduation.

Teacher educators, local school administrators, and other education professionals are currently developing support strategies that will assist the beginning teacher to gain confidence in his or her ability to succeed in the classroom. These strategies are most important to the young teacher during those first years of teaching, and it would seem logical to deal with them at their time of importance.

Although programs that appear to be based upon several varying perspectives or paradigms are currently being planned and implemented, there is still some question as to their effectiveness. An overwhelming need exists for data concerning the impact of beginning-teacher programs. Studies relating to participant satisfaction appear to be the most abundant in the literature. However, data regarding teacher turnover, teacher

performance, teacher attitudes and morale, and student performance and attitudes are yet to be collected.

It has been predicted that the next decade will be a time of severe teacher shortages. Successful beginning-teacher induction programs must be more readily used as a means of keeping good teachers in the profession. Induction requires much more than the traditional first-year teacher course, the first-week orientation conference offered by school districts, or the most recent fad in our profession. Implications are for more complex and collaborative types of induction programs based upon tested solutions directed at the true nature of the problem. As stated by McDonald (1980), our programs should be attempting to reduce the trauma, suffering, and floundering that too many beginning teachers experience.

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MENTORING AS A COMPONENT OF INDUCTION

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Most beginning teachers express the feeling that their principals expect them to be a "finished product" and that teaching is a "sink or swim" situation (Fagan & Walter, 1982). Although business leaders have recognized the importance of mentoring for decades, the idea of using mentors to assist beginning teachers in a formal or structured way is relatively new. In 1972, an experimental induction program began in Great Britain that included "tutor-teachers." It wasn't until the early 1980s, however, that mentoring began to be seriously discussed by educators in the United States.

More recently, public dialogue has been initiated about the concept and practice of mentoring. State legislatures have mandated induction programs which have often included mentoring as a component.

The purpose of this chapter is to assist vocational educators in understanding the concept of mentoring and how this process may be useful in teacher induction programs. The chapter will (1) examine the meaning of the concept of mentoring and the inherent processes and behaviors involved in it, (2) review the needs of beginning teachers, (3) identify the commonalties in projects that use the mentoring process, (4) identify positive and negative outcomes of the use of mentoring, (5) explain possible models of mentoring that could be used, and (6) suggest the questions about mentoring that need to be answered through research, dialogue, and reflection.

The Concept of Mentoring

The term "mentor" has its roots in Homer's epic poem "The Odyssey." The story told in the poem takes place during the Trojan War when Odysseus goes off to war and entrusts his son Telemachus to his friend and advisor, Mentor. Mentor serves as a guardian of the household and accompanies Telemachus on a journey to search for his father and also to "find himself." From time to time the goddess Athene takes the image of Mentor and also helps Telemachus.

Although the term mentor has been used loosely to mean teacher, coach, sponsor, leader, and opener of doors, Merriam (1983) found that mentoring had not been clearly conceptualized and that the literature on mentoring was relatively unsophisticated. Al-

though the literature related to mentoring has expanded, a common definition of meaning for this concept is still not clear (Galvez-Hjornevik, 1986). Anderson and Shannon (1988), while struggling to form a conceptualization of mentoring, reported three concerns related to this task. First, there is a lack of a conceptual framework organizing the mentoring functions and the behavior found in the various definitions of mentoring. Second, the definitions given mentoring are too vague to be helpful to individuals assuming this role. And third, while most definitions indicate that a mentor should promote the professional and personal development of a protegé, it is thought that these definitions overlook three important aspects: (1) that mentoring is a nurturing process, (2) that mentors serve as role models, and (3) that mentors must exhibit certain dispositions. They offered the following definition:

> Mentoring is "a nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels, and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development. Mentoring functions are carried out with the context of an ongoing, caring relationship between mentor and protegé." (p. 40)

In addition to the help that is given to a protegé by a mentor, Klopf and Harrison (1981) conceptualize mentoring as an enabling process and emphasize the fact that the mentor and protegé mutually gain insight, knowledge, and satisfaction.

Processes and Behaviors Involved in Mentoring

The five functions mentioned by Anderson and Shannon—teaching, sponsoring, encouraging, counseling, and befriending—have specific processes or behaviors associated with each function. The teaching function includes the process of modeling, informing, confirming or disconfirming, and prescribing or questioning. Sponsoring involves three behaviors: protecting, supporting, and promoting. Encouraging includes affirming, inspiring, and challenging. Counseling involves the problem-solving process with behaviors such as listening, probing, clarifying, and advising. The last function, befriending, involves two behaviors: accepting and relating.

In addition to being competent in the functions of mentoring and their inherent behaviors, mentors need certain dispositions that can be defined as broader constructs than skills since they represent *recurring* patterns of behavior. The dispositions listed in Anderson and Shannon's model include opening themselves to their protegés, leading them

incrementally over time, and expressing care and concern about their personal and professional welfare.

Usually in mentor/protegé relationships that naturally occur, the mentor is older by about eight to fifteen years (Levinson, Darrow, Klein, Levinson, & McKee, 1978). If the mentor is older by more than fifteen years, the relationship may be like a parent-child relationship; if younger, the mentor and protegé are likely to regard each other as peers.

Needs of Beginning Teachers

Although it is not the purpose of this chapter to identify the needs of beginning teachers, this knowledge is important because the training of mentors should include information that is pertinent to beginning teachers' needs. There have been innumerable studies on the needs of beginning teachers (Hitz & Roper, 1986; Odell, 1986; Odell, Loughlin, & Ferraro, 1986-87; Varah, 1985; Varah, Theune, & Parker, 1986). Similar concerns of beginning teachers included (1) development of reflective thinking about how theory fits into their teaching; (2) discipline and classroom management; (3) school routines, scheduling, and policies; (4) curriculum and lesson planning; (5) motivational ideas; (6) moral support; (7) individualized instruction; and (8) the ability to work effectively with others (teachers, parents, colleagues, aides).

Odell, Loughlin, and Ferraro (1986-87) found beginning teachers needed help with teaching strategies in the instructional process, information about the school district, and where to obtain resources and materials pertinent to the information taught. Their study used a functional approach to define the needs of beginning teachers. In their research, support teachers (mentors) continuously reported questions asked by their protegés during the first year of teaching. Seven generalized categories of questions were derived: Instructional, System, Resource, Emotional, Managerial, Parental, and Disciplinary. This procedure not only identified the categories of need or concern, but also enabled the researcher to track the types of questions asked each month and to identify the change in the types of questions asked. During the first month of teaching, the number of questions was high for all types of support. After that, the need for instructional resources and emotional support remained constant; however, managerial and support related to parents was evident only at the time of the first parent meetings. This research has direct implications for the type of training and the timing of the different types of support given by mentors.

In studies that utilized mentors, beginning teachers felt that the mentor was an important element in the induction process (Huffman and Leak, 1986; Wubbels, Creton, & Hooymayers, 1987; Hoffman, Edwards, O'Neal, Barnes, and Paulissen, 1986). Mentors provided support and encouragement, collegiality, and helpful suggestions on improving teaching. Mentors gave assistance in many areas, including explaining the procedures, rules, and expectations of the school; sharing ideas and instructional materials; and giving suggestions for instructional presentations, organization of time, and classroom management.

Beginning teachers surveyed felt it was useful to have a mentor who taught the same grade level or subject matter. They also felt that the availability of adequate time for informal and formal conferencing and planning was a primary factor in determining the mentor's ability to address their needs.

Commonalties and Differences in the Use of Mentoring as a Component of Induction

The literature is beginning to reveal an increased interest in the use of mentoring as a component in the induction of beginning teachers. State legislatures have supported this concept, and research in this area is continuing to grow. Examination of a myriad of studies revealed that both commonalties and differences exist. Most programs used the mentor as one member of a team of experts who offer a variety of kinds of assistance to the beginning teacher. There was generally some type of assistance given to the mentor to help him or her in the mentoring process. Usually the mentor was in close proximity to the beginning teacher. Observation and dialogue, although varying in amount and type, were essential components of the process. Assessment and evaluation, also varying in amount and type, were included in all of the induction and mentoring projects.

Although the overall process used in the research related to mentoring would appear similar, the differences are great. The number of mentors used to assist the beginning teacher, the nature of their assistance, and the meaning of the concept varied among the studies reviewed. For example, some of the studies used the term mentor to describe another teacher who was in the beginning teacher's school, who taught the same subject and grade level, and who was designated to be his or her mentor. In one study (James, 1987), three types of mentors were identified: (1) the pedagogical mentor who was a teacher educator, (2) a practitioner mentor who was from the same school, and (3) a content mentor

who was an expert in the content area taught. The mentors used in another study (Gold & Pepin, 1987) were all retired teachers who were trained and then paid to serve as mentors. The benefits given to the mentors such as stipends, released time, and inservice education were also different.

The amount and type of training given the mentor was probably the greatest difference revealed in the research studies examined for this review. In some situations there was a one-time two-hour workshop or no training at all; in other studies, the training was equal to a year long three-credit course with training throughout the year. In some cases the training included information on adult learning and the meaning of a helping relationship; in other situations the training related only to pedagogy.

The use of assessment and evaluation was another area in which differences were revealed. In all the studies the mentor assessed the beginning teacher by observing and then provided informal feedback. However, in some cases the mentor assisted in the annual evaluation of the teacher and discussed the merits and weaknesses of the beginning teacher with the building administrator. In other studies great efforts were made to ensure the privacy of the mentor's assessment, and there were strict guidelines that separated the final evaluation of the beginning teacher from his or her work with the mentor. Some studies used several qualitative and quantitative measures to determine the results of the mentoring process. Instruments used included structured interviews, questionnaires, rating sheets, and logs or journals. In other studies only one type of measure was used to evaluate the mentoring process.

Positive and Negative Outcomes

Levinson et al. (1978) state that "the mentor relationship is one of the most developmentally important relationships a person can have in early adulthood" (p. 97). The mentor takes responsibility for another adult and attempts to foster his or her growth and development. In this way, mentorship is one path to the realization of the significance of one's own life (Bova & Phillips, 1984).

School systems that implement the mentoring process may reap rewards in more than one way. First, they may improve the beginning teachers' skills and possibly retain good teachers. Second, the mentor teachers' skills may also improve in a variety of ways.

As indicated earlier, beginning teachers soundly endorse the use of mentors in the induction process. Success of the young professional appears to be strongly linked to the

availability of mentor-protegé relationships (Wright & Wright, 1987). The research indicates that a protegé may develop new talents and increase his or her confidence and self-esteem through this type of relationship. It has helped beginning teachers to improve their teaching, remain in the profession, and eliminate the isolation they may feel (Varah et al., 1986). One positive outcome of the mentor programs has been growth of the mentors (Hawk, 1986-87). Mentors have reported that the process forced them to focus on and improve their own classroom teaching skills, made them more aware of the need for educators to communicate, and helped them to better understand their superiors' roles.

Despite these positive attributes, several authors (Clemson, 1987; Fox & Singletary, 1986; Klopf & Harrison, 1981) have discussed problems that might emerge in the mentor-protegé relationship. Clemson indicates that there are only a few successful mentor programs in operation. She gives five major reasons they are not working: (1) spontaneity and fit; (2) mutual benefit; (3) multidimensional relationships; (4) trust, time, and rewards; and (5) effects on the entire system.

Mentor-protegé relationships should be spontaneous, and the individuals involved should be compatible. Both parties should benefit from this relationship. Sometimes the relationship does not work out because the mentor may try to control the life of his or her protegé, or the protegé may become too dependent and growth is thus stifled.

Since the relationship is multidimensional, it may change over time. The participants should be in control of the factors that influence their relationship such as meeting times and places and the amount and type of assistance. The protegé must feel free to confide in the mentor and to make mistakes without consequences. This inherent trust level takes quality time, which the productivity level of the institution sometimes does not allow.

At times the mentor-protegé relationship evokes the jealousy of others. The entire school system should feel a part of this process and be partners in the credit and praise or the correction and remediation of a mentoring program.

Another factor in mentor-protegé relationships is male and female roles. Naturally occurring mentor relationships generally occur between the same sex, but when they are between male and female, this dimension must be considered. Although mentoring relationships between men and women in business have been found to be emotional and intense, they generally have not been sexual in nature (Merriam, 1983).

Merriam postulated that only the positive experiences related to mentoring have been reported extensively, and the "worst case scenario could include a mentor who is exploitive, egocentric, stifling, over-protective, and limited to one perspective." Additional problems that may become evident include rivalry between the mentor and protegé, or the

identification of the protegé with the mentor in the eyes of others. Awareness of all the dynamics of the mentoring relationship, plus the ability to maintain a positive dialogue, does much to reduce the negative aspects that might occur.

The costs of implementing a mentoring program should not be thought of in positive or negative terms. Although the costs may be considerable in time, energy, and money, this investment may result in the growth of human capital (Rauth & Bowers, 1986).

Models of the Mentoring Process

Although there have been a number of models proposed for the use of mentoring, Thies-Sprinthall (1986) asserts that there has been no critical examination of the assumptions and practices of mentoring. She states:

> It is not reasonable to assume that minimally trained classroom teachers can achieve a level of competence to provide differentiated intensive supervision. In fact, there should be real worry that well-meaning but poorly trained "buddie" may pass the "wrong set of the secrets of the trade." (p. 19)

Thies-Sprinthall cautions educators about the use of mentors on the basis of the clearly superficial training that is generally given to them. A two- or three-day workshop is not sufficient for the mentor to be of any real support to the beginning teacher. She also criticizes the selection of mentors when it is done largely on a random basis that is contradictory to both theory and research on supervision. The model proposed for using the mentoring process in induction programs and also used by Thies-Sprinthall in her research is based on three assumptions:

1. The mentor teacher and the support team should be in close proximity to the beginning teacher.
2. The mentor training should be school-based, on-site, and should occur over a considerable period of time.
3. The instruction of mentors should be based on *theory* and *research*.

These assumptions are based on research related to effective inservice education.

Since it would be virtually impossible for university teacher educators to supervise the geometric expansion of mentor teachers needed for an entire state, Thies-Sprinthall suggests the use of the "triple-t" (teacher) method. In the implementation of this model she trained two-person teams as teacher trainers from each school system. They, in turn,

taught mentor teachers in their school. Mentors were then enabled to work with beginning teachers.

One of the key elements in her model is to move the teacher-trainer and mentor to a higher cognitive and developmental level (Thies-Sprinthall & Sprinthall, 1987; Thies-Sprinthall, 1984). A person (mentor or teacher-trainer) who helps another human being (beginning teacher) to grow and develop must be one who can process experiences at a high-order stage of development (Sprinthall & Bernier, 1978). A goal of the model, then, is to stage growth for the teacher-trainers *and* the mentors, which means arranging the training to promote growth to higher levels of reflection and action.

The training of teacher-trainers was done in a two-semester seminar and practicum (a total of forty-five weeks at three hours per week). The instructional model used for this training was based on the action-reflection, role-taking approach. Dialogue and relationships were central ingredients to the learning. The readings for the course were theory-related, and weekly journals were required for reflection and introspection. A considerable amount of time was spent mastering the elements of empathic listening and conflict resolution.

The teacher-trainers used the same curriculum the following year to teach the mentor teachers in their individual schools. Dialogue with the teacher-educator was maintained throughout the second year through biweekly meetings, thus keeping the training as close as possible to the original training received by the teacher-trainees.

Results of the use of this model have been positive and two major benefits seem evident. First, school systems have created new roles for teachers (teacher-trainer and mentor) that are more complex and challenging. Second, the teacher-trainers, mentors, and beginning teachers become better classroom teachers as a result of the process.

The model advocated by Gray and Gray (1986) underscores the approach that avoids the problems of narrowly trained mentors. They advocate using a Four-Phase Formalized Induction Program.

Phase one involves the selection and matching of mentor and protegé. Being close to each other in the school and teaching the same grade and subject are helpful, as is having a similar philosophy of teaching. The mentor should be competent, helping-oriented, open-minded, flexible, confident, resourceful, politically wise, and should be an empathic listener. The protegé should be receptive and responsive; he or she should also be a self-analyzer and should value the mentor's help.

Phase two involves the training of those participating in the induction process: mentor, protegé, administrator, and support staff. This training should include such topics

as adult relationship skills, helping relationship skills, the professional roles of a teacher, supervision strategies, and the mentoring model, which includes setting goals, planning, carrying out, and completing the project.

Included in Phase two is a Helping Relationships model which outlines the help that is appropriate at each level of the mentor-protegé relationship. For example, at level one the protegé may observe how the mentor acts professionally with others. At level two the mentor teaches the protegé "the ropes." At level three the mentor and protegé have dialogue about the school's culture and ethics. At level four the mentor supports the protegé's ideals for change. And, finally, at level five the protegé "fits in" and also promotes change. At the highest level the protegé is competent and confident to function without mentor assistance.

In Phase three the mentoring process is monitored. Supervision strategies, conflict resolution, and formative evaluation are used for retraining and new training.

Phase four is for summative evaluation. Through the use of both qualitative and quantitative measures, the mentoring process is examined. The benefits and problems of the mentor and protegé are identified, as well as the impact of their interaction. Recommendations for improvement of the process and skills needed are included at this time.

Gehrke (1988) suggests that the mentor-protegé relationship is a kind of love relationship. "Certainly it is different from powerful friendships, from romantic love, and parent-child love," but the mutual involvement, comprehensiveness, and affection that exists in the relationship gives it some elements of commonalty with other kinds of love relationships. Keeping this idea in mind, Gehrke suggests eight guiding principles for promoting mentoring among teachers.

The first of these principles is choice. Both the potential mentor and protegé should have a voice in choosing each other. A second principle is time. Plenty of time must be given to allow for the growth of the relationship. Negotiation is the third principle. This means that the two people must be allowed to negotiate the types of things taught and learned, and that they can renegotiate as time passes. The fourth principle is that the protegé must be allowed to move from dependence to independence. The fifth principle is that the mentor must consider the uniqueness of the protegé. Reciprocity is the sixth principle: the mentor may be the one helped at times. The seventh principle is that of a whole life vision; the mentor must be committed to helping the protegé with issues that go beyond the school day. Finally, the eighth principle is that the relationship must involve dialogue, not merely monologue, between the mentor and protegé.

Further Research, Dialogue, and Reflection

The reported research on mentoring in vocational programs was extremely limited. The Vermont Mentor Program reported by Fuller (1987) highlights an important concern for vocational education. Training in vocational education is done in two-year postsecondary institutions as well as in secondary schools. The needs of beginning teachers in a postsecondary (area vocational-technical) school may be quite different from those in a secondary school. Although the teachers in postsecondary institutions may have a wealth of experience, they may lack a background in pedagogy. Beginning teachers in secondary schools may have pedagogical training, but little work experience. Thus, mentoring relationships and success may differ in each type of school.

Another concern is finding appropriate mentors for beginning vocational teachers. In rural schools there may be only one home economics teacher, one agriculture teacher, or one industrial arts teacher in the entire school system. Would another teacher, for example an experienced math teacher, be an appropriate mentor for a vocational agriculture teacher? Greater cost and coordination might be involved if we were to provide each beginning vocational teacher with a mentor from the same subject matter area. Should we develop cooperative arrangements for mentoring projects and research with other subject matter disciplines and several school districts?

It is apparent that further research, dialogue, and reflection are needed to illuminate the concept of mentoring. The following categories of questions may need to be addressed:

Conceptualizations of Mentoring

1. How can we develop a common meaning or conceptualization of the mentoring process? Indeed, should there be a common meaning in such a personalized process?

The Mentoring Relationship

1. What are the dynamics of the mentor-protegé relationship?
2. What skills are needed by the mentor and protegé to develop an effective relationship?
3. What is the relationship between the cognitive level of mentors and their ability to promote growth effectively in their protegés?
4. How can mentors encourage teachers in becoming more reflective about their teaching?

Outcomes of the Mentoring Process

1. What are the positive and negative outcomes of the use of mentoring (mentor, protegé, school, student, profession)?
2. Does the use of mentoring in the induction process create more effective teachers and help in retaining these teachers?

Developing a Mentoring Model

1. What should the role of mentoring be in a beginning teacher induction program?
2. Are the goals of mentoring, when used as a component of induction, the same as the goals for induction?
3. What selection procedures and criteria, including the dispositions of mentors and protegés, will ensure the selection of effective mentors?
4. Does the length and type of training given the mentor influence the growth of the beginning teacher?
5. What type and amount of training is necessary to assist mentors to become effective?
6. What is the amount of time (daily, weekly, monthly) needed for mentors to address adequately the needs of beginning teachers?
7. What resources are needed to implement the mentoring process?
8. How can this process be implemented in rural areas?

Vocational Education and Mentoring

1. Are the needs of beginning teachers in vocational education different from those of other teachers?
2. How can the mentoring process be implemented in two-year postsecondary institutions?
3. What cooperative arrangements related to teacher induction that could incorporate mentoring should be investigated with other subject matter areas and among school districts?

The idea of using the mentoring process to help beginning teachers improve their teaching performance and keep them in the profession is promising (Huling-Austin, 1986). Clearly, vocational educators have just begun to investigate this issue. Studying the mentoring process and conducting research that is theory-based are essential as we attempt to examine and improve mentoring as a component of induction.

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CERTIFICATION PATTERNS AND VOCATIONAL TEACHER INDUCTION

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Vocational education faces a challenge in the 1990s that has few precedents—a shortage of qualified teachers with few proven means for solving the problem. The National Center for Education Statistics in 1984 projected a need for more than one-half million new secondary teachers by 1993 (Janson, 1985). Assuming that current proportions will continue, 95,000 new vocational teachers will be needed. Some experts believe there may be a need for even more if emphasis on vocational education expands due to increasing dropout problems nationwide. The magnitude of the shortage has also been addressed by the U.S. Department of Labor, which projects that the number of adult-vocational teachers needed by 1995 will exceed 304,000—an increase of 19% over the 1984 demand. This number represents about one-third of the 1.1 million secondary teachers needed in 1995 (*Occupational Outlook Quarterly* cited in "Data File: Vocational Education Teaching," 1988).

Where will these additional vocational teachers be found? Evidently not in the current national "excellence" movement. Two recent national reports—from the Carnegie Task Force and the Holmes Group—call for major revisions in teacher preparation that could significantly affect teacher supply in a negative direction. In *Tomorrow's Teachers*, the Holmes Group (1986) advocates reforming teacher education and the teaching profession by abolishing undergraduate teacher education programs. Similarly, in *A Nation Prepared: Teachers for the 21st Century*, the Carnegie Task Force (1986) advocates the elimination of undergraduate majors in education and the addition of a "master in teaching" graduate degreed program. Both proposals would likely result in an increase in the time required for preparation of teachers and a probable decrease in applicants. These groups seem oblivious to the shortages that already exist in such areas as math, science, language, and certain areas of vocational education. According to Gerald (1985), the overall supply of teachers as a percentage of demand is projected at 65.5% for 1992. A recent report (Hechinger, 1985) indicated that the numbers of quality young people entering the teaching

profession have been declining steadily and that the most able of these teachers leave within five years.

Historically, teacher preparation programs—including vocational teacher education—have consisted of two main types: (1) traditional (college-based) programs, involving formal coursework in both technical subject matter and teaching methodology, followed by a period of supervised experience in the classroom, and leading to full certification; and (2) nontraditional (college-operated) programs, wherein individuals with academic content preparation or work experience enter the classroom on a provisional basis prior to receiving intensive instruction in teaching. These provisional teachers are assisted in securing full certification over a period of years. More recently, many states have instituted alternative routes to certification in order to increase the supply of teachers, to improve the quality of teachers, or to accelerate the certification process (Roth & Lutz, 1986).

Alternative programs that meet the American Association of Colleges of Teacher Education (AACTE) requirements are recognized as unique in their approach to preparing nontraditional teachers. However, they are identical to traditional programs in that they contain the same set of standards for certification. Williamson, Backman, Guy, Kay, and Turley (1985) state that "teacher certification practices by state departments of education should ensure that any prospective teacher is 'safe to practice' through demonstration of pedagogical competencies, appropriate knowledge, and professional values before one is permitted to practice" (p. 21).

Wisniewski (1986) has determined that alternate teacher preparation programs that produce quality teachers contain certain characteristics. They are (1) predicated on a strong commitment to academic competence and to rigorous expectations regarding professional performance; (2) based on partnerships between universities and school systems; (3) organized to involve both partners in the selection, preparation, and mentoring of participants; and (4) delivered by a blend of rigorous campus preparation and an internship supervised by strong teachers. These four characteristics are considered essential in meeting certification requirements to prepare high-quality teachers.

Certification in any profession is essentially aimed at protecting the client by assuring the qualifications of the professional. In education, programs have been in existence for many years that allowed individuals to enter the classroom without a standard teaching certificate or preparation for teaching. These temporary solutions to shortages of qualified teachers are typically called emergency, limited, temporary, or nonstandard permits, and are often valid for just one year (Roth & Lutz, 1986). This chapter is not directed at emer-

gency certification; rather, its focus is on nontraditional routes that address both the quality and quantity of teachers.

Most alternative routes to certification provide a nontraditional means for obtaining a standard teaching certificate. These departures from traditional teacher education programs differ in terms of target audience, design of preparation, and length of preparation. They usually include field-based experiences in schools and/or supervision during the first year of teaching prior to certification. Alternative programs share the following characteristics: (1) the individual is allowed to enter the classroom as a teacher prior to completing full preparation (standard requirements); (2) full preparation (standard requirements) may not be required to achieve certification; (3) nontraditional students (e.g., those with bachelor's degrees, those with experience in business and industry, retirees) are accepted; (4) traditional preparation programs are bypassed or accelerated; (5) the programs are established and operated under state policy (Roth & Lutz, 1986).

Vocational education has the oldest ongoing alternative preparatory route to teaching, yet the research on the effectiveness of these programs has been sparse and inconclusive (Erekson & Barr, 1985). The historical route in trade and industrial education has been, by definition, an alternative means to certification of experienced tradespeople, many of whom have not had the requisite college education expected in most other areas of education. Although less common, alternative routes to certification are found in other areas of vocational education as well.

If there is any area in which alternative credentialing should be viable, it is vocational education. A mandate of the Smith-Hughes Act and other legislation establishing vocational education was that instructors must have had work experience in the specific occupational area; this requirement was an outgrowth of the perception that a vocational teacher would have difficulty teaching occupational skills that he or she had not personally performed in the world of work (Miller, 1982). Most states have enacted policies and procedures that have allowed persons competent in a content area to be inducted into critical fields. The major alternative approaches to certification will be explored in the next section of this chapter.

Patterns of Certification

Several models will be examined to describe the various patterns of teacher certification. The first is the traditional degreed program. Using Florida as an example, a tradi-

tional undergraduate teacher preparation program includes these nine requirements: (1) students must qualify for entrance to the university by making an appropriate score on the SAT or ACT; (2) after admission and prior to their junior year, students must pass the CLAST test, which measures competence in reading, writing, and quantitative skills; (3) students then enter the professional teacher education program and are subject to prescribed state department regulations on appropriate courses to be taken to obtain a teaching certificate; (4) students must pass the Florida Teachers Examination, which measures competence in reading, writing, and pedagogy; (5) students then must pass a subject-matter competency test; (6) students must pass a minimum of nine semester hours of student teaching; (7) upon graduation, students must complete a year of supervised teaching before they can qualify for a teaching certificate; (8) in addition, teachers are fingerprinted "to be sure they are of the proper moral/ethical character to teach . . . ."; and (9) once admitted to the profession, teachers will be regularly tested and will be required to continue their education if they expect to remain in the profession (Kysilka, 1988).

In contrast to the traditional model, a recent survey by the AACTE (1985) found that 43% of institutions responding (in 38 states) indicated that they were developing new alternative routes; however, some of these met existing certification requirements. Of those developing new routes, 26% promoted the use of alternative state certification requirements and 5% did not require student teaching.

Adelman, Michie, and Bogart (1986) reported on twenty alternative certification and retraining programs across the country; of these, seven were applicable to all subjects, including vocational education. The authors summarized the report by stating that alternative programs ". . . appeared to be attracting well educated individuals with a sincere interest in teaching" (p. 8); ". . . featured more field experience and more intense supervision in the field . . ."(p. 9); ". . . produce[d] subject-area-proficient teachers who [were] also rated highly on instructional skills in comparison with traditionally prepared beginning teachers . . ."(p. 10); and ". . .were found to be responsible and innovative approaches to addressing local and state issues of teacher supply and quality" (p. 11).

The seven alternative models to teacher certification described in Adelman et al. (1986) are listed below:

1. *University of Maryland Alternative Certification Program*

   This program originated as a result of a Maryland Department of Education initiative to develop alternative standards for persons wanting to teach. Although the program is sponsored by the University of Maryland, it is closely coordinated with the

state department. The eight participants who completed the program at the end of the first summer received certification and a master's degree in education. Twenty-six students were enrolled in the second cycle. Participants were mainly at the mid-career level. Admissions requirements included a bachelor's degree with a minimum 3.0 GPA, fulfillment of the requirements for entry into graduate school, a successful interview, and a writing sample. Completion of the program required two summers and an academic year. Participants completed 43-49 credits of integrated course offerings that focused on most areas of curriculum and instruction, including early childhood, elementary, and secondary education. Three credits of classroom observation were required in the fall, followed by a supervised apprenticeship in the spring. Participants paid their own tuition. A small state grant was used to initiate the program and operate it the first year.

2. *Memphis State University Lyndhurst Program*

Memphis State University (specifically the Colleges of Education and Liberal Arts), local education agencies (LEAs), and the state education agency (SEA) have designed an alternative program to attract academically talented students into teacher shortage areas (e.g., math, science, foreign languages, English, art, and music). The program is financially supported with a grant from the Lyndhurst Foundation. Admission to the program includes sponsorship by the LEA and favorable evaluation of academic success, interviews, and writing skills. The teacher candidates participate in an internship in the fall while attending classes one night a week at Memphis State. The internship includes both classroom teaching and observations.

3. *New Jersey Provisional Teacher Program*

This program was proposed by the New Jersey Department of Education in 1983, approved by the legislature in 1984, and initiated in 1985. Nearly 200 provisional teachers were employed in the state by 1986. The program is intended to replace emergency certification with a more rigorous alternative (provisional) route to teaching and to increase the supply of teachers available by allowing the hiring of non-education majors. However, districts may continue to hire teachers with emergency certification in bilingual, special, and vocational education. The SEA maintains a recruiting office and makes contacts with most colleges in the state. Applicants must hold a baccalaureate degree that has a thirty-credit major in the field to be taught. Approved applicants are endorsed to take an appropriate section of the

National Teacher Exam (NTE); attainment of the minimum score on the NTE qualifies the applicant for a statement of eligibility that allows the person to seek employment in any of the state's 600 school districts. LEAs may select whomever they wish from the teacher pool. Once a candidate is selected, the LEA requests a provisional teaching certificate from the state certification office. During the first year, participants are required to complete a program of formal instruction and field experience. The provisional teacher is brought into teaching in three phases:

Phase I	Eighty hours of instruction and twenty days of observation/initial teaching under the supervision of a certified teacher.
Phase II	Ten weeks in one's own classroom with weekly observation by a professional support team and four hours of formal instruction per week.
Phase III	Twenty weeks of formal instruction (four hours per week) and monthly observation, along with formative and summative evaluations leading to recommendation for standard certification.

4. *University of New Mexico/Santa Fe Public Schools Intern Program*

This alternative program was designed to prepare liberal arts graduates for teacher certification. The University of New Mexico, St. John's College, and the Santa Fe Public School System cooperatively plan and conduct the program. Participant qualifications include a 3.0 GPA on the last sixty undergraduate semester hours, interpersonal skills, potential for growth and development as a teacher, and breadth and depth of academic preparation. The program consists of fourteen months of combined coursework and classroom teaching. The intern attends summer school before and after the yearlong teaching internship. Weekly evening seminars and monthly Saturday workshops are provided during the academic year. A unique approach to the internship assignment involves being part of a two-member team to teach the classes. Each intern observes his or her peer teacher, as well as other experienced teachers, and is observed by these veteran teachers. In the first year, fifteen out of sixteen alternative teachers successfully completed the program.

5. *Pennsylvania Teacher Intern Program*

This is an alternative certification program designed for individuals who hold college degrees and who are interested in teaching but lack the required certification credentials. The program, which began in 1972, operates in cooperation with six colleges and universities that have teacher intern programs. Teachers in all subjects and levels are eligible to participate. To enter the program, individuals must hold a

bachelor's degree, meet the requirements for admission to graduate school, and have a teaching position. When these criteria have been met, the state issues an intern certificate that is valid for three years. During this time, an intern must remain enrolled in the sponsoring institution. Interns receive the same salary as a beginning certified teacher. Level I certification is given once the internship is completed.

6. *University of Southern Maine Teachers for Secondary Schools Program*
This program was designed to address concerns of teacher quality rather than teacher shortages. Selection criteria for applicants include superior academic performance, a record of involvement with adolescents, and personal qualities such as motivation, risk taking, creativity, and work-travel experience. The program uses a two-semester postbaccalaureate alternate preparation model. Program completers receive a teaching certificate and lack only nine to twelve semester hours towards completion of a master's degree. The content of the first semester is primarily university-based coursework with required classroom observation. In the second semester, the intern is placed in the classroom under the supervision of a veteran teacher. The University of Maine provides a university supervisor, plus biweekly seminars for further professional development.

7. *Forsyth County (North Carolina) Consortium for Personnel Development*
Three institutions of higher education—Salem College, Wake Forest University, and Winston-Salem State University—along with the Winston-Salem/Forsyth County School System and the State Department of Public Instruction have cooperatively planned and implemented a nontraditional program to allow teachers in the local school system to become recertified in new areas of teaching. The components of the program include competency-based courses, field experiences in the new teaching area, and evaluation by university and school system supervisors. The field experience is usually completed in the summer and includes observation of experienced teachers in the new teaching area. These activities are organized as an individualized development plan. It was noted, however, that some teachers did not complete the program due to the lack of structure in their coursework.

Although the seven programs described by Adelman et al. (1986) deal with alternative teacher preparation models, all of them require the participants to have a baccalaureate

degree. Since the 1917 Smith-Hughes Act, vocational education teachers have had to take a nontraditional path to enter the teaching profession without a four-year degree. An example of this alternative model for vocational teachers was developed in Georgia. The Georgia model is highlighted in the following discussion.

Georgia Alternate Vocational Teacher Preparation Model

The Georgia model was designed to provide quality, individualized, professional education for certain vocational teachers seeking a performance-based teaching certificate. For the most part, these teachers are instructors in trade, industrial, and health occupations programs who come directly from the industry or business related to their area of instruction. Since July 1, 1988, the applicant for certification in any of the alternate program fields has been required to possess at least two years of postsecondary education (i.e., a two-year degree, or the equivalent, in approved, post-high school education). Previously, only a high school diploma or approved equivalent diploma was required.

The model has evolved over the last eighteen years into a comprehensive system of resources made readily available to this special population of teachers. Content has been assembled based on requirements established by the Georgia Department of Education (1982). They are as follows:

- *Foundations of Education*
  Ten quarter hours, including coursework in the nature of the learner and coursework in historical, philosophical, and sociological foundations of education.

- *Curriculum and Methods*
  Ten quarter hours that are specific to the age level and certification field requested.

- *Special Education*
  Five quarter hours of methods to teach the special needs student. Each teacher certified in Georgia must have this course in the identification and education of children with special needs.

- *Student Teaching*
  The student teaching experience must provide for at least fifteen quarter hours of college credit and must consist of a full-time, daily, in-school placement for nine to twelve weeks. The approved substitute for student teaching while employed as a teacher on a provisional certificate is a yearlong internship under the joint sponsorship of an approved college and the local school system, for which at least fifteen quarter hours of college credit must be earned.

This sequence of professional education coursework is required for all teacher education programs in Georgia. The alternative model provides a highly structured, compe-

tency-based system for the delivery of the required courses determined to be appropriate for the vocational education teacher.

Erekson and Barr (1985) state that "Vocational education research has been inconclusive about the effectiveness of teachers without traditional education degrees, possibly because of the wide range of experience and training of those with provisional certificates." This suggests that evaluation of alternative routes should include assessments of the background and previous experience of the teachers involved, since these factors may explain differences in outcomes (ERIC Clearinghouse on Teacher Education, 1986).

In addition to the variety of backgrounds and experiences held by participants in alternative teacher preparation models, there is a limited number of teachers prepared in these programs with the exception of vocational education instructors. The number of participants in the seven programs described by Adelman et al. (1986) ranged from 8 to 186. Because of this, analyses of data for decision making has been extremely difficult and the conclusions must be limited. Therefore, research related to traditional teacher preparation models must be used to provide appropriate research questions to examine alternative models.

Clark (1988) makes four claims about research in teacher thinking (education) that relate to the study of alternative preparation models:

1. Research in teacher education has limited but important contributions to make to the practice of teacher preparation. The areas of greatest contribution may be in rationalizing, justifying, and understanding historical teacher education practices.
2. The research concerning successful teachers does not answer the questions of what new teachers should be taught or how they should be prepared to teach. Although we know how experienced teachers think, plan, and make decisions, we do not know how best to teach novice instructors to incorporate these traits.
3. Particular modifications and improvements made in the curriculum and methods of teacher preparation need to be developed, researched, and adopted by teacher educators themselves.
4. Research needs to be directed toward the way teacher education operates and how teacher educators think. Current research has impacted the ways in which teachers are prepared in more ways than just measuring the effect of teachers' activities in the classroom.

The traditional teacher preparation model needs to be researched in the four areas defined by Clark (1988) so that alternative models can be compared to the traditional model. Without these data, the implications of the alternative models of teacher preparation can be discussed only in qualitative rather than quantitative terms.

Recommendations

1. *Eliminate Emergency Certification.*

Teacher education reform efforts such as the Holmes Group (1986) in *Tomorrow's Teachers* have called for increasing academic and pedagogical training, maintaining rigorous standards for certification and upgrading teachers' working conditions and inservice training (Loadman, Brookhart, and Wongwanich, 1988). However, it is unrealistic to expect teacher education reforms to increase standards while states continue to issue emergency teaching certificates to individuals who are not properly prepared for the challenges they will face in the classroom. Society can ill afford unqualified teachers having the responsibility of teaching our youth. Without the subject matter knowledge and the pedagogical skills needed to successfully complete their duties, unprepared individuals usually fail. Therefore, it is imperative that all states discontinue the "emergency" approach to meeting teacher supply needs.

2. *Establish alternative programs based on successful models.*

An acceptable alternative model must first produce high quality teachers with the competencies needed to be successful. The alternative models that were reviewed emphasized several characteristics that appear to assist the new teacher in adapting successfully to the classroom.

One of these characteristics is early introduction to pedagogical skills. The New Mexico and Georgia models included preparation courses during the summer prior to entering the classroom. The Southern Maine mode introduced the intern during the first semester prior to the internship experience. Therefore, regardless of how pedagogical skills are introduced, the important criterion appears to be when they are taught. The optimum time for the introduction of pedagogy is before individuals enter the classroom as teachers.

A second characteristic that helps the novice teacher to be successful is a continuing professional development program that fosters solutions to classroom problems as they occur. Most of the programs described had either weekly or biweekly seminars that provided solutions to the challenges faced by the novice teacher.

Another important factor of successful alternative preparation models is the experienced veteran teacher who provides regular supervision to the new teacher. It

is evident that these veteran teachers need released time and preparation for this new responsibility. The mentor role of these individuals is critical. Therefore, assistance to veteran teachers in assuming this role is vital to the success of alternative programs. Teacher education personnel provided seminars and other coursework for new teachers as well as for veteran teachers in these successful models. Teacher educators were also involved in supervising the beginning teachers in order to maintain contact with the problems faced by beginners.

3. *Strengthen traditional teacher preparation programs.*

A critical implication from the alternative preparation models is the danger that states may actually reduce resources and efforts for traditional teacher preparation programs in order to fund unproven and competing alternative programs. A teacher shortage can often be dealt with more cost effectively by strengthening the traditional programs rather than by creating competing alternative models. This was illustrated recently by one state which established an alternative program at a cost of over $100,000. The program attracted just twenty-three participants, and not all of these individuals entered the teaching profession. The same investment in improving traditional programs could have affected hundreds of prospective teachers.

Most traditional programs are capable of serving additional numbers of potential teachers with existing staff and facilities. Very few teacher preparation programs are operating at maximum enrollments. Therefore, if additional new teachers can be developed without further investment in personnel and facilities, these added investments should go to improving existing teacher education programs. Given this enhanced financial climate, traditional teacher preparation programs can play a vital role in maintaining the quality of new teachers and in meeting the demand for additional teachers.

At the same time, states can actively address their teacher shortages by fostering a different alternative model than has been seen in the past. The authors believe that what is needed is an institutionally guided alternative program that has equal status with traditional systems of teacher preparation. For this to occur, three conditions must be present:

1. There must be a public outcry for high quality teachers in sufficient quantity to meet local needs, even if additional taxes are required.
2. Institutions of higher education must commit both leadership and significant resources to the two equal but dissimilar systems of teacher preparation.

3. State-level governing boards (those representing grades K-12 public education) must form alliances with institutions of higher education in order to structure effective policies on alternative teacher preparation that will ensure beginning teachers of equal quality to those from traditional programs.

The shortage of teachers is an accepted fact. In order to provide the supply of teachers, traditional teacher preparation programs must embrace the concept of alternative approaches, while strengthening their ongoing efforts. As evidenced in the cited alternative models, many institutions across the country are already doing so. The authors maintain that the will to expand options in teacher preparation exists; however, the resources to implement such approaches have been limited and the institutional environment has been restrictive.

The sinking of the Titanic brought about reform in maritime law relating to the safety of passengers on ocean liners. Sufficient lifeboats for all passengers became the new standard. Perhaps the impending crisis in the public schools in the 1990s—the insufficient supply of qualified teachers—will trigger the responses needed to implement the high quality alternative teacher preparation programs envisioned in this paper.

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INDUCTION NEEDS OF PROFESSIONALLY TRAINED BEGINNING VOCATIONAL TEACHERS

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Research on teacher induction (the transition period from student or worker to teacher) is in its infancy. Much is already known, however, about the needs, concerns, and problems of the first-year teacher. From their review of literature on beginning teachers from 1930 to 1950, Johnson and Ryan (1980) identified four common problems of many beginning teachers: discipline and classroom management, motivation of students, planning and organization, and adjustment to the teaching environment.

Veenman (1984) reaffirmed and expanded Johnson and Ryan's conclusions in his extensive literature review of eighty-three studies from ten different countries among secondary and elementary teachers. He found the eight most highly rated problems were classroom discipline, motivating students, dealing with individual differences, assessing students' work, relationships with parents, organization of class work, insufficient and/or inadequate materials and supplies, and dealing with problems of individual students.

Benz and Newman (1985) found that first-year teachers felt weak in working with parents, in their knowledge and skills in computer-based instruction, and in writing legibly on the chalkboard. They also found that teachers felt less prepared in handling discipline and classroom management. Classroom management and dealing with parents have also been suggested as problem areas by Barnes and Huling-Austin (1984).

Beginning teachers also encounter problems that are not directly related to the instructional component of the job but that have a direct impact on their success. They are often put in situations—misplacements and overload—that prevent them from succeeding in their first years of teaching (Huling-Austin, Putnam, & Galvez-Hjornevik, 1986; Huling & Hall, 1984; Hoffman et al., 1985). Results from the study "Making Do in the Classroom: A Report on the Mismanagement of Teachers" conducted by the Council for Basic Education and the American Federation of Teachers (cited in Huling-Austin, 1987) showed that many teachers are teaching out-of-field, that is, teaching subjects for which they are not certified. Roth (1986) suggested that this problem is especially evident for beginning teachers, with 12.4% of all newly hired teachers teaching in fields for which they are not certified.

The beginning teacher's workload was also identified by Ryan (1987) as a problem area. He writes, "The beginning teacher comes in and gets the curricular and extracurricular carcass—the leftovers" (p. 29). Rodman (1988) reported a RAND Corporation study which found that beginning teachers are normally placed in the most difficult schools and then are given the most undesirable teaching assignments. Undesirable assignments that are often given to the first-year teacher include large study halls, teaching out of his or her certification area, responsibility for time-consuming extracurricular activities, working with low-ability or disruptive students, floating from classroom to classroom or school to school, having numerous class preparations, teaching the difficult classes, or being responsible for a disproportionate share of extra duties (e.g., bus, lunch, and/or rest room).

Over the years much research has been done to identify the problems of beginning teachers in general, but only limited research is available to address the specific problems of beginning vocational teachers. In their study of first-year teachers of secondary marketing education programs in Virginia, Heath and Price (1987) investigated five areas that addressed critical components of the programs. They found that a number of problems are encountered by beginning marketing teachers, including sequencing the curriculum to increase its effectiveness, job hopping by students, an uncomfortable feeling about teaching adult classes because of age and lack of experience, overall lack of understanding of the marketing education program within the school system, a lack of understanding of the program among other faculty members, and a lack of knowledge about the marketing education student organization manuals and events. Several of these problems are obviously unique to vocational education.

According to a study by Farrington (1980), beginning vocational agriculture teachers indicated several problem areas such as dealing with a high number of students with low academic ability, adapting instructions for students with low academic ability, motivating students and keeping them interested, and coordinating activities of an active young farmers organization. Although some of the problems cited in these two studies are unique to the subject area being taught, many have no curriculum-specific restrictions.

According to Huling-Austin (1987), teacher isolation has a negative influence on the beginning teacher. The beginning teacher goes to a classroom in the morning and, other than a short lunch period, stays in the classroom until the end of the school day, having very little or no contact with other teachers. First-year teachers may spend the workday in isolation from their colleagues, without the chance to learn from their more experienced peers.

Beginning teachers seem most concerned about personal survival—just making it day-to-day. Odell & Loughlin (1986) found that the first-year teacher will ask, "Does it get better?" or "Will I make it to the end of the week?" or "How do I do a good job and still have a life outside of teaching?" Not only are first-year teachers struggling to adjust to their professional roles, but they also face a variety of personal concerns (McDonald & Elias, 1983; Ryan et al., 1980). Their colleagues criticize their new ideas as being naive or idealistic; family and friends question why teaching takes so much out-of-class time.

The beginning teacher is usually young, taking on a new role—that of an adult in the real world with financial responsibilities and decisions—and leaving the secure and isolated world of the campus. Veenman (1984) described this abrupt change as "reality shock" or "transition shock," with effects ranging from an initial perception that there is a problem, through changes in behavior, then changes in attitude, changes in personality, and, finally, a decision to leave the profession. According to Ryan (1987), the problems of the first-year teacher are closely related to the age of the teacher, "with young people trying to make the adjustment to what they want to be, what they think they are, and what they discover they actually are and what they are able to do" (p. 31).

As we can see, much has been done to assess the needs of beginning teachers in general, but few studies have been completed in the area of vocational education. To fill that void in the literature, researchers at Virginia Tech, with funding through the National Center for Research in Vocational Education, have undertaken a study of the induction process of beginning vocational teachers.

Purpose and Objectives

One of the purposes of the overall study is to identify the induction needs of beginning vocational teachers. This chapter will address the needs of those who have obtained certification to teach in their vocational subjects through undergraduate vocational teacher education programs. The objectives of this paper are

1. To identify the start-up problems of beginning vocational teachers.
2. To identify the problems of vocational teachers in their first two years of teaching.
3. To identify the problems of third-year vocational teachers.
4. To identify the induction needs of first-year vocational teachers.
5. To identify the induction needs of vocational teachers during their first two years of teaching.
6. To identify the induction needs of third-year vocational teachers.

Procedures

In order to identify the problems and needs of beginning teachers, we identified two groups of vocational teachers for the study. The first group consisted of first-year teachers and the second group consisted of third-year teachers. Teachers were selected to represent all of the traditional vocational service areas: agriculture, business, home economics, trade and industrial education, industrial arts/technology education, health, and marketing. They were also selected to provide representation of teachers at the middle school, regular comprehensive high school, vocational center, and adult programs offered through the secondary school. The first-year teachers' group met at the end of about their third week of school. The third-year teachers' group met three weeks later.

A total of seven teachers were invited for each group in order to have assurance that an adequate number of teachers would attend the sessions to allow for use of the nominal group technique (NGT) research method. At the actual sessions, there were five first-year teachers and seven third-year teachers.

The NGT was used with both groups to identify a priority list of problems and needs (see Tables 1-6). The following steps used with the NGT were adhered to by the researchers:

1. Silent generation of ideas by the participants.
2. Round-robin sharing of ideas.
3. Clarification for common understanding of ideas.
4. Identification of top priorities.
5. Ranking of top priorities.

Values were calculated for each of the ideas by assigning scores depending on where the item was ranked. For example, items that were ranked first obtained a score of 10, items that were ranked second obtained a score of 9, and so forth. Once items were assigned their ranking scores, the scores were summed and multiplied by the number of times they were ranked (See "Rankings" in Tables 1-6).

Following the meeting, the first-year vocational teachers were requested to prepare daily logs via tape recordings of answers to specific questions. Each week the logs are to be mailed to the investigators for transcription and analysis.

In addition to the daily logs, the first-year vocational teachers will be visited regularly by the researchers who conducted the individual interviews. This fall, the teachers will be visited on two occasions. Continued visits after the first of the year are contingent on continued funding of the research study. The visits made by the investigators will con-

sist of observations of at least two classes, and interviews with the teacher, appropriate supervisors, and mentors if available. Results of this component of the study will be reported at a later date. The remainder of this chapter will present only the results of the NGT sessions.

Findings

Problems of Beginning Vocational Teachers

The highest value score for first-year teachers was placed on "Developing interesting lesson plans for each day and motivating the students." Somewhat lower in their ranking, but second and third on their priority list, came "Lack of money for needed equipment purchases" and "Keeping class sizes to 20" (see Table 1). These problems of beginning teachers were not found in the literature. We suspect that these are problems that are unique to vocational educators rather than to other types of teachers.

Table 1

Problems Encountered by First-Year Vocational Teachers

Ranking	Value	Item
1	116	Developing interesting lesson plans for each day and motivating the students
2	63	Lack of money for needed equipment purchases
3	54	Keeping class sizes to 20 (either too large or too small)
4	30	Teaching mainly in a field that I did not prepare to teach
5	24	Outdated textbooks
6.5	22	Too many responsibilities
6.5	22	Lack of confidence in my ability and knowledge
8	20	Not enough time to coordinate every day
9	14	Finding time for paperwork (too many forms to fill out)
11	10	Lack of time to plan
11	10	No curriculum guide
11	10	Dealing with a variety of attitudes every day

The perceptions of the most severe problems of the beginning teachers appear to be quite different from the perceptions of the more experienced teachers as to what their first two years were like. The more experienced teachers thought their most severe beginning problems were more closely related to poor orientation, teacher-student relationships, and methodology (see Table 2).

Table 2

Problems Encountered in the First Two Years of Teaching as Identified by Third-Year Vocational Teachers

Ranking	Value	Item
1	155	Lack of understanding of school procedures/policies and boundaries of authority
2	132	Thinking that every student had to like me and developing teacher-student relationships
3	120	Developing a technique for teaching the subject matter
4	112	A feeling of being overwhelmed constantly
5	108	No system for organization of materials/shop
6	54	Lack of instructional materials
7	48	Lack of confidence—learning the subject matter well enough to become comfortable teaching
8	36	Coping with the stress of a new job
9.5	28	Adjustment to inadequate facilities
9.5	28	General discipline problems
11	26	Taking things too personally and placing unfair blame on myself

When reviewing the problems identified currently for third-year teachers, there were some similarities between third-year teachers' problems and those of first-year teachers such as concern for the lack of equipment and the motivation of students. The third-year teachers seemed to feel the greatest pressure from outside activities consuming their time. These are similar to the problem areas as identified by Ryan (1987). An additional high priority concern was the lack of communication with the administration and state staff (see Table 3).

Table 3

Problems Encountered by Third-Year Vocational Teachers

Ranking	Value	Item
1	336	Activities outside of teaching such as excessive paperwork, club sponsorships, impromptu after school activities, competency-based education paperwork, in-school suspension, and meeting deadlines
2	210	Lack of supplies and equipment; teaching in an outdated and overcrowded facility
3	140	Lack of communication with the administration and state staff
4	136	Teaching high and low ability students; for example, meeting individual needs and motivating unmotivated students
5	78	Teaching new subjects and programs, making and implementing new curriculum and training aids from scratch, and training for different vocational student organization activities
6	69	Developing lesson plans; integrating new strategies, computers, games, and projects

7	64	Merging first- and second-year students and curriculum overlap
8.5	57	Better job options present the question: Do I want to continue teaching?
8.5	57	Faculty's attitudes toward vocational education and the image of the program by the guidance department
10	30	Understanding vocational education accounting and state funding for the program

Induction Needs of Beginning Vocational Teachers

The second phase of our findings will identify the outcomes of research objectives 4-6. What are the induction needs of first-year teachers, beginning teachers during the first two years of teaching, and third-year teachers?

The beginning first year teachers put their highest priority for assistance on having better organizational skills, the elimination of extra duties, and the opportunity to work with a master teacher or mentor (see Table 4).

Table 4

Needs of Beginning First-Year Vocational Teachers

Ranking	Value	Item
1	75	Obtaining better organizational skills
2	63	Reduction or elimination of extra duties
3	54	Opportunity to work with a master teacher or mentor
4	39	Less paperwork
6	34	Program of instruction or curriculum guide
6	34	Inservice training on the basics
6	34	More specific and less general guidelines
8.5	28	Meeting equipment needs
8.5	28	A list of final enrollments before school starts
10	26	Elimination of Beginning Teacher Assistance Program (Virginia BTAP)

In addition to a more detailed orientation, the third-year teachers also put top priority on the assistance of an assigned mentor teacher to assist teachers in their first two years of teaching (see Table 5). The identified need for a more detailed orientation is consistent with the top priority problem of teachers in their first two years (see Table 2).

Table 5

Needs of Teachers During The First Two Years of Teaching Perceived by Third-Year Vocational Teachers

Ranking	Value	Item
1	312	A more detailed orientation
2	282	An assigned mentor teacher
3	108	An administration tougher on discipline with a more structured in-school suspension
4.5	104	Meetings for new teachers
4.5	104	More instructional materials, workbooks, and textbooks
6	100	More time to plan
7	72	Inservice relating to my field and workshops taught by veteran teachers
8	64	More evaluation and feedback
9.5	56	A better understanding of students' attitudes
9.5	56	Explanations of purchase orders, supplies, and materials, with a list and catalogs of companies on state contract

When the third-year teachers stated that excessive non-teaching activities were a problem, we expected to see "the need to be relieved from those duties" identified. This was not the case. "More parental support" was identified as their top priority need and far outranked all other expressed needs (see Table 6). The second, but not closely ranked need, was greater understanding from the guidance department. This complaint was expected since it had been identified earlier as a problem. The third need—for technical update—is related to several other problems such as those that had ranked 4, 5, and 6 in Table 3.

Table 6

Needs of Third-Year Vocational Teachers

Ranking	Value	Item
1	246	More parental support
2	155	A better understanding of program by guidance department and more input into counseling for program requirements
3	116	Technical update, additional computer training, and college classes paid for by the school system
4	92	More materials
5	81	More shop equipment
6	76	Updated films and training materials provided by the state
7	56	Evaluation by someone who understands my program
8	54	Reassurance that the administration is supporting me and more cooperation from administrators
9	52	Support from the community and business
10	51	A stricter attitude toward discipline by the administration

Conclusions and Recommendations

The following conclusions and recommendations do not apply to every school system in this study. However, based on the consensus of the participants, these are the conclusions that can be drawn from the results and hence the recommendations that were made by the researchers.

Conclusion 1:

The teacher education graduates in this study did not obtain enough skills in preparing and delivering interesting lessons or in learning how to motivate students adequately. As evidenced in the literature (Johnson & Ryan, 1980; Veenman, 1984; Farrington, 1980), the problem of motivating students tends to be a common problem among teachers. In addition, the third-year teachers felt deficient in providing for individual student differences.

Recommendations:

Teacher education programs should develop a valid method of evaluating their curricula to determine if they are adequately preparing students on lesson preparation, delivery, and motivation of students. Revisions need to be made to curriculum and methods courses to alleviate this deficiency.

Additional courses should be offered to practicing teachers to assist them with meeting individual student needs, motivating students, developing curriculum, and improving lesson plan development to include the latest training needs.

Conclusion 2:

School systems involved with the subjects in this study do not provide adequate orientation on school procedures and policies. Further, there seems to be a lack of communication between teachers in the study and the local school administration and state vocational education supervisory staff. The identification of the problem "Lack of communication with the administration and state staff" is probably unique to vocational education in that assistance and communication from local and state supervisors are expected.

Recommendations:

School systems should evaluate their new-teacher orientation programs (if such programs are in place) to determine if the programs are meeting the needs of new teachers.

Further, better communication needs to be established between the administration and teachers in the schools.

Improvement of communication should be the responsibility of and initiated by the administration and state staff, rather than by the novice teacher. Perhaps an inservice training session for working with new teachers would be in order for many school systems.

State staffs should also consider developing a system for keeping in touch monthly with new teachers in their regions for at least the first year of teaching.

Conclusion 3:

Teachers in this study believe that there is a lack of understanding of vocational programs by the guidance department and by other faculty members.

Recommendations:

Individuals preparing to be guidance counselors should have courses that deal with all the programs they will be counseling students to enter. Further, an orientation program should be provided by the school system for beginning counselors to aid them in understanding each of the programs in the school.

New teachers should be given the opportunity to understand the role of the guidance department and to become comfortable with the counselors in the school in which they are teaching and with the counselors in the feeder schools.

Conclusion 4:

Teachers are not prepared for the massive responsibilities and expectations of a teacher of vocational subjects.

Recommendations:

Both teacher education programs and local school systems need to provide realistic expectations for beginning and rising teachers. Further, they need to prepare teachers to handle these responsibilities.

It could be that many school systems have unrealistic expectations of novice teachers. School systems need to analyze these expectations and determine what is realistic for persons who are inexperienced in their fields.

Conclusion 5:

Teachers in this study felt inadequate with their organizational skills for both materials and shops/laboratories.

Recommendations:

Teacher education programs should be designed to include the development of organizational skills that will enable new teachers to manage materials and shops/labs.

School systems should provide new-teacher orientation and ongoing assistance to beginning teachers until they feel comfortable with managing materials and shops/labs.

Conclusion 6:

Novice teachers are assigned too many responsibilities in addition to the expectations of teaching.

Recommendations:

School systems should consider hiring personnel to perform tasks such as bus, cafeteria, rest room, and hall duty; coaching sports; handling paperwork; and completing clerical work related to teaching such as typing tests and handouts. Teachers should be allowed and expected to complete teaching-related tasks during the time they have been relieved of non-teaching duties.

Conclusion 7:

There is a consensus among new and experienced teachers alike in this study that there are inadequate resources to conduct their programs.

Recommendations:

The public should be made aware of the inadequate resources and facilities that are available for teaching the future work force.

Efforts should be made to involve industry in the development of vocational training facilities.

Legislators at the national, state, and local levels should be made aware of the need for adequate funding.

Vocational teachers need to spend less time on clerical and insignificant duties and more time on promoting their vocational programs to parents, businesses, and legislators.

Funds need to be invested in communication and promotion in order to bring in more funds for program support.

Conclusion 8:

Beginning teachers need assistance when they first begin their teaching experience. Both the first-year teachers and the third-year teachers thought that the assistance of a mentor teacher would help alleviate the problems teachers have in their first years of teaching.

Recommendations:

School systems should have at least a part-time coordinator with assigned responsibility for the health and well-being of beginning teachers.

A structured mentor system (nonthreatening and nonevaluative) should be developed to assist the beginning teacher in his or her first two years of teaching. If a peer teacher is charged with evaluative responsibility, that person should *not* be asked to be the mentor.

Discussion

The priorities for assistance that beginning vocational teachers identified—"Obtaining better organizational skills," "Reduction or elimination of extra duties," and "Opportunity to work with a master teacher or mentor" (see Table 4)—seem somewhat inconsistent with what they identified as their most critical problems. However, we would anticipate that having better organizational skills would reduce six of the highest-ranked problems: "Developing interesting lesson plans for each day and motivating the students," "Too many responsibilities," "Lack of confidence in my ability and knowledge," "Not enough time to coordinate every day," "Finding time for paperwork," and "Lack of time to plan" (see Table 1).

The finding that beginning teachers perceived their problems to be different from the problems of the first two years of the more experienced teachers is an interesting one. This difference could be due to a change in the nature of problems as the first two years of teaching takes place, or it could be that the problems are simply different between the two groups in this study. We suspect that teachers' perceptions of problems change as the first two years of teaching progress. Thus, we plan to analyze these problems through inter-

views, daily logs, and group sessions at the end of the school year to determine the nature of the problems and the teachers' perceptions of the problems that occur as they are inducted into the profession.

As we anticipated, there were several problems that were similar to those found in the literature which may be considered generic to all beginning teachers. However, as we also anticipated, there are problems that are unique to vocational education such as lack of equipment money; the problem of low enrollments because vocational education is an elective or too high enrollments which are difficult to fit into a laboratory situation; not enough coordination time; too many forms to complete; no curriculum guide; lack of organization in the shop; inadequate facilities; vocational student organizations; integration of computers into the vocational curriculum; better opportunities in industry that pull teachers away from teaching; lack of communication with the state department of education; lack of understanding of funding for vocational programs; and lack of understanding of vocational education by the guidance departments, the administration, and other teachers. Even in the areas that appear to be generic problem areas, there are environmental factors in vocational education that make many of the problems different. That is why we believe there is a need to continue this line of research with the eventual goal of developing an induction program that will assist beginning vocational teachers to make a smooth transition into teaching.

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INDUCTION NEEDS OF BEGINNING VOCATIONAL TEACHERS WITHOUT TEACHER EDUCATION DEGREES

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Vocational teacher education programs today face unprecedented challenges in their critical role of preparing teachers who are occupationally competent and equipped with the pedagogical abilities required to impart their knowledge, skills, and attitudes to vocational students at the secondary and postsecondary levels. Perhaps at no time in history has there been so much attention focused on teacher education.

The current emphasis on excellence in education is the result of a number of reports on education, beginning with the report of the National Commission on Excellence in Education in 1983. Cook (1985) and Passow (1984) analyzed these reports and concluded that all of them identified teachers and effective teaching as the central core of the educational process, and that the reports expressed a deep concern for the quality of teaching and for the American public's perception of the teaching profession. The premise presented by Cook, and widely supported in the literature, is that the improvement of teacher competence and teaching that results in improved student learning will have the greatest impact on the quality of secondary and postsecondary vocational education while giving the most return for the time and money invested. The reports are generally critical of teacher education and suggest that teacher preparation programs need substantial improvement.

Challenges to Teacher Education

In considering the challenges to vocational education today, Erickson (1985) points out that the condition of vocational teacher education in many states has become increasingly more critical. He reports declining enrollments, which have resulted in significantly reduced budgets and vocational teacher education programs slipping even further down the priority list in higher education institutions. He points out that many teacher preparation programs are driven by certification requirements and that the field itself is fragmented along program lines and in competition with one another for dwindling resources. Adams, Pratzner, Anderson, and Zimmer (1987) also describe the serious condition of vocational teacher education programs and conclude that vocational teacher education departments in

universities have reduced the number of full-time faculty and support staff, that state education agencies have reduced funding for vocational teacher education activities performed by colleges and universities, and that the number of undergraduate and doctoral students enrolled in vocational programs has declined.

A national survey by Zellner and Parrish (1985) categorized the four most critical issues facing vocational teacher education as (1) recruiting competent persons, (2) gaining support for teacher education, (3) keeping teachers technologically current, and (4) discovering ways to improve the image of vocational education.

One of the most critical issues facing vocational teacher educators in the area of trade and industrial (T&I) education is how to provide an induction program that will reduce the many problems confronting first-year teachers, many of whom have little or no previous formal teacher training or college education. Induction is defined by the Pennsylvania Department of Education as "planned experiences, activities, and studies . . . to increase the beginning teacher's knowledge and improve his/her teaching skills" (*Guidelines for Induction*, 1987, p. 9). The induction approach involving teacher educators, according to Parks and Henderson (1986), requires an intensity and a personalization that goes beyond standard teacher education delivery patterns and demands supplemental funding from outside sources if institutions are to fulfill such a role. Several states such as Pennsylvania (Walker, 1986b), Florida (Fardig, 1986), and Arkansas (Eads, 1986) have responded to the educational reform mandates and have designed and implemented performance-based teacher education programs in an attempt to better meet the needs of first-year vocational teachers.

Norton (1985) supports the innovative teacher education approaches of these previously mentioned states. He recommends that one way to improve the preparation of vocational teachers in general and T&I teachers specifically is to establish more competency-based and performance-based teacher education programs, more competency-based staff development programs involving teacher educators as principal players, more field-based outreach programs, and more first-year teacher internships and other helping services.

Historical Perspective on the Source of Vocational Teachers

The recruitment, preparation, and retention of vocational teachers has a longstanding tradition. Snedden (1910), Prosser (cited in *NSPIE Bulletin 19*, 1913), and Allen (1919) advanced the premise that a successful teacher in a vocational field must primarily be a competent workman, but must also possess certain pedagogical skills. The thinking of these men was incorporated into the Smith-Hughes Act of 1917, which supported the "craftsman" teacher approach and provided funds for training qualified individuals in pedagogical skills. Prosser and Allen (1925) conceived of three plans (labeled Plans A, B, and C) for preparing vocational teachers. Plan A involved teaching prospective vocational teachers in both occupational and teaching skills, an approach that has evolved into our current practice of providing full-time preservice teacher education. Plan B provided occupational training for those who possessed teaching skills but did not have sufficient work experience in the subject area to be taught. This plan is seldom used today. Plan C was designed to provide specific pedagogical training to those individuals who were recognized as being competent in the occupational subject area to be taught. According to a study by Terry and Young (1981), Plan C is the most suitable and most often used approach for the induction of vocational teachers into the teaching profession.

Degreed and Non-degreed Vocational Teachers

Ideally, individuals skilled in some trade, technical, or health occupations field should obtain pedagogical knowledge and skills prior to induction into teaching. This kind of preservice education is particularly important today with the many demands placed on vocational teachers such as (1) delivering the curriculum in shorter instructional time periods; (2) revising the curriculum to keep it updated; (3) recruiting students into a mostly elective vocational program; (4) integrating the basic skills of math, science, and communications into the instructional program; (5) utilizing educational technology such as microcomputers to increase instructional efficiency; (6) delivering instruction to a very diverse group of students, including those with special needs; (7) maintaining discipline and student motivation in an era when both are somewhat out of control; (8) keeping up with occupational changes in the field; (9) keeping up with certification requirements and professional education developments; and (10) managing a quality vocational education program that meets accountability standards.

For many years, T&I teacher educators have attempted, with limited success, to recruit full-time degree-seeking students into their programs. There are many reasons why recruitment is difficult; for example, the image of the teaching profession, the lack of economic rewards, conditions in the schools, and the occupational experience requirements. While it is desirable for vocational teachers, like other teachers, to possess teaching degrees, teacher education institutions have not been able to provide a sufficient number of graduates to meet the demands of the teaching field. The usual method of providing degree-holding vocational teachers is to provide on-campus inservice courses over a number of years until degree requirements are met.

Most T&I teacher educators support the notion that vocational teachers at the secondary level should obtain degrees, but differ over whether degrees should be earned prior to teaching or after entering the teaching profession. Frantz (1986) maintains that individuals who are going to be vocational teachers should acquire baccalaureate degrees through formal four-year programs.

The report of the National Commission on Secondary Vocational Education, "The Unfinished Agenda: The Role of Vocational Education in the High School" (1984), states that vocational teachers must acquire the same level of education and possess the same teaching competencies as their academic colleagues. Detwiler (1985) describes two programs leading to vocational degrees at Penn State University: the traditional full-time preservice program, and the extended baccalaureate program that allows students up to ten years to complete their degrees.

The educational reform movement has caused most states to review and revise their certification standards for vocational teachers. Several states have changed their entrance requirements into the field, have mandated competency testing, and have increased the number of credit hours of professional education coursework. Additionally, at least one state has mandated movement toward a degree. According to Reece (1984), non-degreed teachers in Texas must now advance within seven years to a certification level that requires a bachelor's degree. The Georgia State Board of Education has made it a requirement that all vocational teachers hired after June 30, 1988, must possess a two-year degree or the equivalent from an approved postsecondary educational institution.

One of the issues vocational teacher educators must face is whether the profession really wants vocational teachers with degrees. Duenk (1987) examines a number of barriers that stand in the way of real progress in producing degreed teachers. He suggests that careful investigation and study into the core causes of these barriers is needed before

plausible solutions can be found to encourage more vocational teachers to work toward degrees.

Who is Responsible for the Induction of Vocational Teachers?

All beginning vocational teachers experience problems, but additional problems are faced by non-degreed vocational teachers and health occupations teachers who enter the profession with little or no pedagogical training. It is generally perceived as the responsibility of teacher educators, working with state department of education leaders and local school authorities, to address these problems and provide teachers with the knowledge and skills required to deal with them successfully. Now, more than ever before, a collaborative effort involving teacher educators, state department of education personnel, and local vocational education leaders is needed to design an induction program to assist beginning teachers through their critical first year of teaching (Rossman & Copa, 1985).

The issue of who is responsible for vocational teacher education was addressed in 1914 by the Commission on National Aid to Vocational Education (Hawkins, Prosser, & Wright, 1951). It was determined that the responsibility rested with the state boards for vocational education. Erickson (1985) states that the Smith-Hughes Act of 1917 required each participating state to designate educational programs approved to train and retrain vocational teachers. He points out that very early, state departments of education found it necessary to pay selected college and university teacher education programs to offer preservice and inservice preparation for the growing number of vocational teachers that were needed. That pattern of shared responsibility continues today. Schafer and Moss (1977) state that "today, university-based vocational teacher education programs are typically viewed as preservice arms of each state's operating system of publicly-supported vocational education, rather than as integral parts of universities with responsibilities to advance the field of vocational education" (p. 1). They further state that teacher education programs are frequently viewed as having the limited functions of providing preservice and inservice teacher education and related services upon demand from state departments in order to maintain the system.

The sheer magnitude of providing a high quality teacher preparation and induction program for non-degreed teachers demands the attention and commitment of teacher education institutions, state departments of education, professional organizations, and local school vocational educators working together in a climate of mutual respect, confidence,

and trust (Rossman & Copa, 1985). Collaboration, according to Rossman and Copa, means "working together—sharing resources, sharing ideas, developing common priorities, coordinating plans, learning from one another, reducing duplication and avoiding working at cross purposes" (p. 35). Parks and Henderson (1986) report a trend toward more collaborative efforts among organized groups involved in vocational education in order to produce more effective outcomes. This type of collaboration is essential in light of the decreasing resources available from state departments of education and from within colleges and universities (Erickson, 1985).

Collaboration has been happening in Georgia for many years in the form of a statewide vocational teacher education council and a T&I teacher education council involving the state supervisor and his staff and all T&I teacher educators. These councils perform the many functions described by Rossman and Copa (1985) and have been instrumental in developing the state's new teacher preparation system. Other states such as Virginia, Illinois, and Minnesota are involved in collaborative efforts with the prime actors in the infrastructure within their states to examine vocational teacher education issues and set in place strategies that will improve the quality of vocational teacher education now and in the future (Rossman & Copa, 1985).

The preparation of non-degreed vocational teachers in most states is rightfully placed in the hands of qualified teacher educators. However, if teacher education services are not of high quality or are not accessible to those who need them, some state authorities will accept and sometimes even encourage backdoor means of induction into teaching (Goodlad, 1988). Barr (1987) refers to those who enter teaching without formal teacher preparation as "fast track" teachers and challenges the wisdom of allowing such "quick fix" measures that bypass teacher education and alter traditional entry requirements.

Frantz (1984) indicates that the decline in quantity and quality of vocational teacher education graduates has prompted state and local boards of education to make extraordinary responses such as the development and approval of a certification process outside the realm of traditional university-based teacher preparation programs. He points out that California and Virginia provide for alternative approved programs delivered by local school systems for permanent certification. Norton, Kopp, and Harrington (1987) report that, in Florida, certification requirements for postsecondary teachers depend on the employer. In Georgia, postsecondary instructor certification is left in the hands of local school authorities and is no longer a state department of education function. The report of the National Research Council of the National Academy of Sciences, "Education for Tomorrow's Jobs" (Sherman, 1983), recommends that the best method to obtain teachers for vocational

programs is to let local administrators hire persons they judge to have the technical and teaching skills and to let those local administrators provide the inservice programs to develop any additional competencies that may be needed. According to Hanes and Rowls (1984), twenty-nine states have legalized the practice of allowing district-planned or regional activity in lieu of college courses for the purpose of recertifying teachers who participate. Clearly, alternative approaches to certification that do not involve vocational teacher education institutions will have considerable impact on the quality of trade and industrial teacher preparation, not to mention the ultimate effect it will have on teacher education programs.

New Teacher Induction Process

The induction process of non-degreed vocational teachers is unique in that the majority of teachers are recruited directly from business and industry, generally with little or no formal teacher preparation, and without the benefit of a college education. All too often the induction process described by Kane (1985) consists of "being assigned a group of students, being introduced to colleagues, and being given a sketchy curriculum—should one exist—and a key to the classroom" (p. 23). The basic assumption of local administrators is that the new teacher will assume full responsibility the first day on the job and will be able to teach because he or she is a technically competent person; after all, "teaching is a relatively commonplace, easy-to-learn task" (Wildman & Niles, 1987, p. 410). All too often the new vocational teacher must learn to teach in the way so many others were forced to teach—by trial and error. The underlying premise of this approach to induction is that teaching is based upon an abundance of common sense and intuition (Bass, 1973; Haberman, 1985). Haberman points out that pedagogy based on common sense is sheer nonsense and that such induction practices are programmed for failure.

It is well documented in the literature and certainly an indelible impression in the minds of all who have entered teaching that the first year of teaching is a time of great anxiety and stress, and a time when all beginning teachers encounter problems. Fardig (1986) states that vocational teachers who enter the profession directly from business and industry with limited or no professional preparation face problems of a greater magnitude. Bouchie (1987) states that vocational teachers who enter teaching directly from industry encounter more problems and a more difficult time during the induction years than their traditional vocational teacher counterparts.

While it is a generally accepted premise that non-degreed vocational teachers who enter teaching directly from occupations face many problems, a review of the literature reveals few relevant studies pertaining to beginning teachers' problems for this group of new inductees. Fleenor (1974) studied problems of secondary vocational teachers in Indiana as perceived by teachers and administrators. The identified problems were grouped into the following nine categories: (1) program planning, (2) instructional planning, (3) presentation of instructional content, (4) program evaluation, (5) instructional evaluation, (6) management, (7) guidance and counseling, (8) program promotion, and (9) professional development. Fleenor reports that as both teaching and occupational experience increased, the frequency of problems decreased; that as formal teaching preparation increased, the number of problems decreased; and that there was a significant variation in problems among teachers of different subjects as well as the perceptions of problems between teachers and administrators. These findings support the premise that most new vocational teachers need assistance from those who are professionally trained in educating teachers for at least the first critical year (Scott, 1985).

Oswald (1974) studied vocational teacher problems in vocational centers in South Carolina and found that vocational teachers encountered many problems, that directors perceived problems more acutely than did teachers but disagreed on the root causes of the problems, and that perceived problems could be minimized through increased educational preparation and improved inservice programs.

Watkins (1985) conducted a study to identify problems encountered by beginning vocational teachers who had less than twelve months of teaching experience and not more than five quarter hours of formal teacher education. He used the five major problem areas identified in the research on problems of new teachers by Cruickshank (1980) to develop the instruments for his study. Watkins (1985) reported the following findings: (1) beginning teachers do have problems, (2) problems can be grouped into major problem areas, (3) problems can be rated according to seriousness, (4) problems can be ranked within problem areas, (5) teaching level affects the ranking of problem areas, (6) teaching level affects the perceived seriousness of problems, (7) secondary teachers tend to have a greater perceived seriousness of problems than do postsecondary teachers, and (8) there is no significant evidence that beginning health occupations teachers encounter problems to a greater or lesser degree than do beginning T&I teachers. Watkins recommends that all beginning vocational teachers should receive training on dealing with the many perceived and real problems identified in his study.

Cruickshank (1980) gives the following three reasons that teacher problems should be identified: (1) teacher education must be related more directly to the everyday needs of practitioners, (2) teacher concerns or problems do not go away with the accumulation of teaching experience alone, and (3) teacher satisfaction is important. He recommends that teacher problems should be a central focus for preservice and inservice teacher education. An earlier study by Barr and Rudisill (1930) reveals that most teachers who fail do so during their first year of teaching and may well fail during their first two weeks of teaching. They conclude that training institutions should use teacher-identified problems as a basis for teaching prospective teachers how to solve such problems.

Undoubtedly, beginning teachers do receive some valuable support from fellow teachers and from their administrators to help them deal with first-year problems. There is, however, a growing recognition that all new teachers—and especially non-degreed teachers recruited directly from industry—need an organized, systematic program of support and professional development to facilitate their transition into the teaching profession (Fardig, 1986). Fardig suggests that induction programs are becoming more popular because (1) the demands placed on teachers are greater than ever before, (2) there is an expanded knowledge base about teaching that teachers are expected to employ, (3) the public holds high expectations for teachers, (4) present teacher education practices are inadequate to meet the demands of professional practice, (5) the high attrition rate for non-degreed teachers is due in large part to the lack of a formal support system in the induction period, and (6) the final responsibility for quality control of teachers rests with the profession.

Scott (1985) puts the problem of induction into focus with his statement that "in general, no profession throws its new inductees to the 'lions' the way we do teachers" (p. 32). He states that new vocational teachers need the services of trained teacher educators over an extended time span to help them through the maze of the initial teaching year.

What Should Be the Content?

In order to determine what the content should be for an effective induction program for non-degreed vocational teachers, the purpose of induction must be defined. Schlechty (cited in McKinney, 1986) describes induction as the systematic process of "developing in new members of an occupation those skills, forms of knowledge, attitudes, and values that are necessary to effectively carry out their occupational role" (p. 5). The challenge to those who provide teacher education for beginning teachers is to identify those survival skills, knowledges, attitudes, and values (competencies) that are essential for new teachers to obtain and practice to enable them to pass successfully through the *self* stage to the *task* stage

and finally to the *impact* stage (Fuller, 1969). An equally important curricula focus for an effective induction program is on preparing first-year teachers with capabilities to deal with the many problems they will encounter in the transition from craftsperson to vocational teacher. One of the most persistent transition problems is helping newly employed vocational teachers to change their perception of themselves from being tradespersons to being vocational teachers (*Learning the Teaching Trade*, 1981).

Prior to the 1970s, most vocational teacher educators were doing little to help new teachers in the critical first year of teaching. Teacher education was criticized by teachers, supervisors, and administrators on grounds that content in education courses was not always relevant to the problems of classroom teachers; courses were too similar, with too much repetition among courses; teacher educators often provided general ideologies but seldom related these to the solutions of problems actually encountered by teachers; and teacher education services were too often not readily accessible and timely for those who needed them. It was criticisms such as these that prompted vocational researchers like Cotrell, Chase, and Molnar (1972) and others to develop model curricula for vocational and technical teacher education that identified the many competencies needed by vocational teachers. Over the years, a number of states have conducted studies into the pedagogical subject matter competencies needed by preservice and inservice vocational teachers. In addition, a number of states have further analyzed teacher competency lists and have selected those competencies believed to be essential to meet the needs of first-year teachers (Walker, 1986a; Fardig, 1986).

A review of literature on induction programs for first-year vocational teachers revealed that most teacher education institutions are using the performance-based teacher education modules developed by the National Center for Research in Vocational Education as the core of their induction programs and are supplementing these materials with other modules and instructional materials they have developed or obtained.

Status of Induction Programs for Beginning Vocational Teachers

Camp (1988) reviewed the literature on the induction process for vocational teachers and concluded that teacher educators have devoted little effort to systematic assistance for beginning teachers and that the support given beginning non-degreed vocational teachers has been minor or nonexistent. A study of vocational teacher training in Massachusetts (*Learning the Teaching Trade*, 1981) revealed one example of the failure of vocational teacher training for provisionally approved vocational teachers. This study found that the state colleges for vocational teachers were based on the traditional undergraduate preservice

model and that the delivery system for vocational teacher training did not include a provision for student teaching or first-year teacher internships. It is noteworthy that Massachusetts is now operating a model induction program for secondary non-degreed vocational instructors (Norton, Kopp, & Harrington, 1987). It is my conviction that a number of states have developed effective programs for first-year, non-degreed vocational teachers, but have not documented them in the professional literature.

The Pennsylvania State Department of Education has taken a bold step toward providing a program of structured support for all new beginning teachers hired by school districts. Beginning in June, 1987, all school districts have been required by law to provide an induction program for new and beginning teachers to be implemented at the building level by an induction team composed of various district-wide professional personnel, including a colleague-mentor/support person (Walker, 1986a).

Norton, Kopp, and Harrington (1987) describe nine different model training programs for the induction of non-degreed teachers in the states of Massachusetts, New York, Pennsylvania, Ohio, Florida, Arkansas, and Texas and one nationwide model to meet the needs of beginning teachers in private postsecondary schools.

Scott (1985) describes a new Georgia vocational teacher induction program that involves a six-week intensive new teachers institute (NTI) for teachers employed before a school year begins and for those employed as teachers for one year who were hired too late to attend the summer institute the previous year. For those who were not able to attend the NTI, an open-entry program is provided in which a teacher educator from one of four colleges and universities located in different regions of the state provides support and professional development services to the teacher at his or her local school setting on a weekly or biweekly basis. T&I teachers who attend the institute are required by state certification standards to complete a yearlong (three-quarter) internship in which campus-based teacher educators travel to their schools to evaluate teacher performance and to provide helping services. Second-year vocational teachers are encouraged to attend an advanced two-week intensive new teachers institute designed to provide remedial instruction in teacher deficiencies and to provide instruction on identified competencies held for the second year of professional development. This induction program has been in existence for over ten years and has been considered successful by both teachers and local school administrators.

Induction Approaches and Strategies

There are three basic approaches to training strategies for a new-teacher induction program. According to Norton, Kopp and Harrington (1987), one approach is a locally

initiated staff development effort. The second approach is a state department-initiated program that is given to colleges and universities to develop and implement through some type of staff development grant. The third approach is a university or college-initiated program with linkages and close relationships with local educational agencies (LEAs). While all three approaches are being used, the most common is the state department/university approach with cooperative efforts with LEAs.

Most induction programs feature preservice workshops that are typically held in the summer before secondary schools begin and that last anywhere from a few days to six weeks. Participants in these workshops usually can earn college credit and satisfy one or more certification requirements. The content of the workshops is oriented toward survival skills and is centered around the many problems that new teachers are likely to face. Instructional planning is usually included, as well as actual practice sessions of delivering lessons in a simulated classroom or laboratory environment. These workshops generally use competency-based materials and are performance-oriented.

Many induction programs make use of on-site internships, either following preservice workshops or in lieu of the workshops, to impart training to new teachers and to assist them in applying and demonstrating teaching skills. A vital part of the internship program is diagnostic evaluation to identify teacher strengths and weaknesses, with the results used to develop or modify each individual's professional development plan. Principals, vocational supervisors, or experienced master teachers serve as mentors to new teachers in helping them adjust to their new positions and to the expected duties and responsibilities that constitute their teaching roles. The local school agency mentors are an important component of any new teacher induction program; their training, utilization, and support must be given careful attention ("Continuing to Learn," 1987). Teacher education institutions in Pennsylvania (Walker, 1986a), Vermont (Fuller, 1987), and Florida (Fardig, 1986) are successfully using mentors to help newly employed T&I teachers make the transition to a teaching career.

Induction programs also make use of seminars and one-day meetings to bring new teachers together to discuss their problems and successes in their new teaching positions. Induction programs, in addition, use special off-campus courses delivered at strategically located outreach centers in the evenings or on Saturdays when new teachers can attend them. Those new teachers who reside within commuting distance to colleges and universities can avail themselves of regular on-campus coursework or special helping services from senior teacher educators.

Several states are using instructional technology to provide distance learning opportunities to new and experienced vocational teachers. Instructional programs are being delivered by teleconferencing at Oklahoma State University (Lawry, 1986) and at the University of Florida (Sorg and Hudson, 1986). Louisiana State University has developed a system of telelearning, that is, a form of audiographics instruction. This system utilizes a telephone linkage with a combination of a headset, microphones, and speakers for audio, and a computer with a graphics pad for the graphics portion. The system permits two-way audio and graphic communications between the instructor and the students. It is much less costly than teleconferencing and has real potential for economically meeting the needs of vocational teachers remotely located within states (Langlois, McMurry, & Trott, 1987). The University of Georgia's contribution is using microcomputers and phone modems to provide two-way communication and instructional services to first-year teachers statewide.

There are a number of other factors involved in building an effective induction program for beginning vocational teachers. The following factors are among the more important ones:

1. Teacher education institutional support and a committed faculty.
2. State department of education professional and economic support for the costs involved in induction programs.
3. A competency-based/performance-based instructional delivery system that can meet the individual professional development needs of beginning vocational teachers.
4. A collaborative effort involving the state department of education, teacher education institutions, LEAs, and professional organizations to plan, develop, and implement an effective induction program.
5. Incorporation of available research findings and knowledge bases into the instructional delivery systems of induction programs.
6. Qualified vocational teacher education candidates employed as functioning teachers who can meet college and university admission requirements and who want to make vocational teaching a career.
7. Available instructional technology with the necessary monetary support to provide alternative delivery systems for the professional training of new teachers.
8. Recognition and rewards, not only for the new vocational teachers who successfully complete the induction program, but for the mentors and teacher educators who make up most induction teams.
9. Differentiated staffing of induction programs involving teacher educators, field resource persons, LEA mentors, and support personnel as needed.
10. Flexibility of teacher education institutions in offering college credit hours in nontraditional ways.
11. Continuing research into the many problems associated with the induction process for new teachers.
12. Follow-up and evaluation studies of the effectiveness of induction programs.

Major Problems in Operating Induction Programs

There are a number of problems that affect the quality of vocational teacher induction programs. One of the major ones for teacher educators is the large amount of time required to travel off-campus to remote locations to work with new teachers in their classroom setting. More than ever before, teacher educators must have assigned time to perform the duties that will increase their chances to receive tenure and promotion. The present line of thinking in university tenure and promotion committees is that the most important factor is scholarly activities and publications, with average teaching a must and service of little value (Israel & Baird, 1988). Induction programs require intensive, time-consuming teaching and service activities, which limit the time a tenure-track teacher educator has for scholarly activities. However, there are a number of aspects of induction programs that need to be researched, and teacher educators need to focus on those activities that are feasible and in line with the objectives of the induction program to produce acceptable documentation of scholarly activity.

Another major problem is the local school environment, which can be highly supportive, lukewarm, or in a few cases antagonistic. There are several modifications in normal operating procedures that need to be made to enhance the new-teacher induction program. One needed modification, for example, is to make it possible for the mentor teacher to spend time during the teaching day observing the beginning teacher's actual teaching performance. Budgetary modifications should be made to provide the instructional materials required to support the induction program. It is very important for teacher educators to work closely with LEAs to provide the supportive environment essential for a successful induction experience for the new vocational teacher.

Still another major problem lies in the attitude and commitment of many non-degreed, new vocational teachers. It is a traumatic experience to leave an occupation that has been the mainstay of one's life to enter the challenging job of teaching. Facing students with varying aptitudes, abilities, and interest levels is a major challenge, even for the experienced, professionally trained teacher. The adjustment from occupational worker to teacher is a full-time and demanding task, but new vocational teachers without degrees or those with degrees outside vocational education are required to enroll in a part-time teacher education program to meet certification requirements. In addition, many states are now requiring new vocational teachers who enter teaching directly from industry to prove they are occupationally competent in their teaching area by successfully completing the national occupational exam within a specific time period or face termination. Some states are also

requiring tests of basic skills and teacher performance before a renewable certificate can be obtained. These and other demands test the commitment of new teachers and may well alter their attitudes toward teaching as a career. Teacher educators and others involved in induction programs must be aware of the stress placed on new teachers and must deliver services in an encouraging and supportive manner until the new-teacher syndrome has time to pass.

Summary

There is a growing recognition that non-degreed beginning vocational teachers and those who have degrees outside the field of education need a systematic program of timely support and professional development to help them through the critical first year of teaching. A number of states have responded to that need by establishing induction programs, and other states are following suit.

The literature reports a trend toward shortages of qualified vocational teachers and an alarming rate of turnover for vocational teachers that demands the attention of teacher educators nationwide. In a recent career follow-up study of non-education degreed postsecondary and adult vocational teachers, Pucel, Jensrod, and Persico (1981) report that 48.2% of the non-degreed persons who enter vocational education have left during a five-year period. This finding of extremely high non-degreed teacher turnover results in a substantial loss of resources and is a major stumbling block to improving the quality of vocational programs.

Teacher education is viewed today as one of the most critical factors in improving the overall quality of vocational education. New-teacher induction programs can play a major role in reducing teacher burnout, improving the retention of teachers, and improving the quality of instruction offered to our vocational students at the secondary and postsecondary levels.

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FIRST-YEAR TEACHER ASSISTANCE PROGRAMS

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Agricultural education faculty at North Carolina State University, North Carolina A & T State University, Ohio State University, and numerous others are committed to working with their program graduates as well as with other beginning agricultural teachers who are making the transition from being a college student to being a teacher. The university faculties are also committed to working with those teachers whose transition may be a move from industry to the classroom because of lateral-entry certification programs.

First-year or beginning-teacher programs have three basic components: supervisory visits to the teachers, group meetings and/or workshops, and evaluation. Depending on the number of beginning teachers in the state, institutions may choose to serve all beginning teachers as a group; or the teachers may be separated according to their certification level, that is, four-year teacher education program graduates or degreed graduates moving from industry into teaching. The programs are usually funded in cooperation with state departments of education and/or through university budgets.

North Carolina Beginning-Teacher Program: Inservice Model

Clientele Served

Inservice Education for Beginning Vocational Agriculture Teachers, a project funded by the North Carolina State Department of Public Instruction, is designed to help beginning teachers make the transition from being college students to becoming classroom teachers. The primary purpose of the project is to aid beginning agricultural teachers with problems encountered in their first year of teaching. Most of the teachers in North Carolina are graduates of a four-year undergraduate teacher education program. However, it is still necessary to assist the teachers in developing competencies needed for planning and implementing an effective vocational agriculture program. A number of teachers in North Carolina enter the teaching profession through lateral-entry certification. They hold a bachelor's or master's degree from a college of agriculture in a technical agricultural field rather than in agricultural education. While these individuals often require more extensive counseling, they are not separated into their own group.

Program Objectives

The specific objectives of the project are to assist beginning vocational agriculture teachers in

1. Developing the ability to identify and to cope with deficiencies of students in basic computational and communications skills.
2. Organizing an appropriate course of study.
3. Developing an ability to cope with student behavioral problems.
4. Establishing realistic expectations for improving the total vocational agriculture program.
5. Developing occupational priorities to facilitate more efficient use of personal time.
6. Developing the ability to manage consumable and human resources.
7. Developing the ability to identify and utilize community resources.
8. Developing the competencies needed to assess student abilities and to evaluate student progress.
9. Developing the ability to evaluate the school situation and to develop cooperative working relationships with fellow teachers and school administrators.

Program Administration and Components

Dr. Larry R. Jewell, coordinator of the agricultural education program at North Carolina State University, is the director of the beginning-teacher program. Beginning teachers are invited to participate and must have the approval of their local administrators. University credit is not offered for participation; the program is considered a professional development experience. Components of the program include an orientation workshop held at the annual summer North Carolina vocational teachers' workshop, three on-site visits, and a final program workshop held during the state FFA convention.

The orientation workshop is the first professional activity for the program participants. It is part of their first teachers' workshop. Following a luncheon, the teachers are welcomed to the profession by the state supervisory staff, the teacher education staff, state FFA officers, and the executive board of the North Carolina Vocational Agriculture Teachers' Association. The content of the orientation meeting varies. The teachers usually discuss the expectations of the beginning teacher-program and future activities. In some years a review of available curriculum materials, resources, and state materials is also included.

Program objectives are primarily met through a process of individualized counseling by teacher educators from North Carolina State University and North Carolina A & T State University. The teacher educators from the two university faculties conduct three supervisory visits to each participating teacher. It is important that the teacher

educator conducting each of these visits address specified objectives in order to provide consistency in the program.

During the first visit, teacher educators assist beginning vocational agriculture teachers in

1. Identifying and coping with deficiencies of students in basic computational and communications skills.
2. Organizing an appropriate course of study.
3. Developing an ability to cope with student behavioral problems.
4. Identifying and utilizing community resources.

During the second visit, teacher educators assist beginning vocational agriculture teachers in

1. Establishing realistic expectations for improving the total vocational agriculture program.
2. Managing consumable and human resources.
3. Evaluating the school situation and developing cooperative working relationships with fellow teachers and school administrators.

During the third visit, teacher educators assist beginning vocational agriculture teachers in

1. Developing occupational priorities to facilitate more efficient use of personal time.
2. Developing the competencies needed to assess student abilities and to evaluate student progress.
3. Establishing realistic expectations for improving the total vocational agriculture program.

The teacher educators devote one day to each visit. In addition to discussing concerns related to the specified objectives, the teacher educators observe the teacher in at least two classes and provide feedback to the teachers regarding their teaching performance. The teachers also have an opportunity to discuss any other concerns they have at the time.

The final workshop, held during the state FFA convention, provides program participants the opportunity to share their concerns and experiences. A specific topic such as "Planning and Organizing an Adult Education Program," "Conducting Supervised Occupational Experience Programs," or "Working With Local Advisory Committees" is the focus of the meeting. The topic surfaces as a result of finding that a majority of the teachers have problems with this component of their programs.

Evaluation of Participants and the North Carolina Program

The evaluation of the program participants is formative. A majority of the teachers are employed in schools that participate in the North Carolina Effective Teaching Program. In this program teachers must complete a thirty-hour workshop and must follow lesson plan and teaching formats prescribed by the school; they are evaluated by an assigned mentor-teacher in addition to being evaluated by their administrator.

It seems as if the beginning teacher is constantly under scrutiny. For this reason, the teacher educators attempt to portray their role as one that emphasizes support rather than evaluation and accountability. Counseling with the teacher on-site takes precedence over completing teaching-performance evaluations. Oral and follow-up written feedback are provided to the teacher in terms of teaching performance and program strengths as well as recommendations for improvement.

Teachers evaluate the effectiveness of the teacher educators' visits by completing an instrument focused on the visit objectives. The evaluations which are mailed to the project director are helpful in monitoring the program. In most cases the evaluations are good to excellent. Teachers are generally appreciative of the suggestions that come from an individual in their field of instruction.

The primary strength of the North Carolina program is one of continuity for the teacher as he or she makes the transition from being an undergraduate college student to becoming a professional teacher. It becomes evident to the teachers that the support mechanisms they knew as undergraduates are still available to them in their role as classroom teachers. The teachers do not have to commit additional days or travel to the program in order to receive assistance. The program does not cost them any money. Positive public relations with the state staff are nurtured through the program as teachers are aided in converting the classroom theoretical knowledge into the real world situation.

A criticism of this model is the questionable use of teacher educators' time. A great deal of time is required of the program director, since faculty from two institutions, their visits, and teacher schedules must be coordinated. Six teacher educators spend as many as sixty days in the public schools. The activity is viewed as service to the state and of little value for faculty promotion and tenure. Since the project is funded through the State Department of Public Instruction, there are no FTE or financial returns to the institutions. Institutions view dependency on state department funds for special programs differently. Making use of external funding is usually considered favorable since resources other than those of the university are being utilized. On the other hand, determining the existence of a program based on external funding can be a volatile situation.

The issue becomes a philosophical one. If the program is to be successful the teacher educators must believe in the importance of providing service to the state and particularly of providing guidance and support to beginning teachers of vocational agriculture. The program acquaints teacher educators with situations in the schools—situations they might not be aware of if the program were not in place. In the final analysis, the program is beneficial to the teachers, their schools, and the teacher educators.

Ohio New-Teacher Program: Teacher Education Graduate Model

Clientele Served

The Ohio New-Teacher Program in Vocational Agriculture is offered to all new teachers holding a four-year provisional certificate and to teachers who are returning to vocational agriculture teaching after an absence of five or more years. The graduates of teacher education programs, or those who hold four-year provisional certificates, have a basic understanding of the agricultural education program and the science of teaching but may need assistance in making the transition from the theoretical to the real world classroom situation.

Teachers who do not have a four-year provisional certificate but who are beginning careers as vocational agriculture teachers participate in a separate industry certification program. It is the philosophy of the program that major preparation differences exist between teachers in these two groups. Therefore, the teachers have different needs as they make their transitions to the classroom and should, therefore, have different programs to assist them in their first year. Specifically, instruction for industry certification teachers focuses on the science of teaching and preparing the teachers for the agricultural education classroom. The strength of these teachers is in their technical background and work experience. Dr. R. Kirby Barrick coordinates the beginning industry teacher program.

Although the emphasis of the two programs differs, the components are similar. For the purpose of this monograph, the four-year provisionally certified teacher program will be discussed in more detail.

Purpose and Objectives of the Program

The purpose of the program is to provide continuing, periodic assistance to newly certified teachers in areas related to instruction; for example, curriculum development.

student evaluation, and classroom/laboratory management. The objectives of the program are

1. To improve the teaching performance of new teachers.
2. To assist new teachers in developing and implementing a comprehensive local curriculum.
3. To help new teachers develop self-confidence in the activities of a vocational agriculture teacher.
4. To assist new teachers in feeling confident in seeking help when problems or concerns arise.
5. To assist new teachers in establishing communication linkages with local administrators, guidance counselors, local supervisors, neighboring teachers, state supervisors, teacher educators, Ohio Vocational Agriculture Teachers Association (OVATA) officers, and district chairpersons.

Program Administration and Components

The program is coordinated by Dr. Janet L. Henderson, assistant professor of agricultural education at Ohio State University. Enrollees self-select to participate in the program and receive three hours of graduate credit during Spring quarter. Teachers who do not want graduate credit but elect to participate in the program pay a specified course fee per quarter.

The components of the program include school site visitations by teacher educators throughout the year, four Saturday workshops, three industry tours, and an evaluation. Participants use *The Ohio New Teacher Program in Vocational Agriculture: AGR Educ 684.10 Manual* (Henderson, 1988). The manual includes the course outline as well as numerous handouts related to the discussion topics for the course.

An orientation meeting is held during the annual summer teachers' conference. During this time the program objectives are discussed in addition to any questions or concerns that participants may have.

All the workshops are held on Saturdays during each academic quarter. The first, which is held during early August and focuses on program planning, is timely since the teachers are beginning to prepare for the upcoming school year. Specific topics discussed during the workshop include identifying program planning factors, developing course outlines, and establishing classroom/laboratory management policies.

The fall quarter workshop focuses on the FFA. As beginning advisors, the participants discuss group problems and concerns, how to plan effective FFA activities, and the use of the FFA as a laboratory for leadership. Supervised Occupational Experience (SOE) is the topic of the winter quarter workshop. Again the participants discuss their problems and concerns. In addition, they evaluate SOE recordkeeping procedures and

discuss planning and supervising SOE programs. The spring quarter workshop emphasis is on program evaluation. During this workshop, the participants evaluate their first-year teaching experience and discuss planning their summer programs. The last topic covered, reviewing and revising curriculum guides, is meaningful to them now that they have spent a year in teaching.

The industry tours represent a different component in comparison to some of the other traditional beginning teacher programs. One tour is held on the same Saturday as the quarter workshop. The tours enable the participants to acquaint themselves with industry personnel and to acquire technical information useful in teaching about agriculture.

Contact with teacher educators and the teaching component is emphasized in this model. During each of the three quarters, a teacher educator conducts an individual school visit. The visit maintains contact with the teacher education staff, provides the teachers with a support mechanism continued from their undergraduate experience, and supplies the beginning teachers with feedback relative to their teaching performance and program management. Teachers are required to submit unit lesson plans for course credit: two plans for Autumn quarter, three for Winter, and four during Spring quarter. As part of the new-teacher program this requirement not only encourages teachers to develop quality plans, but also provides them with relevant and helpful teaching.

Evaluation of Participants and the Ohio Program

Letter grades for the course are based on the following criteria: (1) participation in the appropriate quarter workshop, 20%; (2) evaluation by the teacher educator, 30%; and (3) required lesson plans, 50%. The teacher educators assess each teacher's performance by using the *Teacher Evaluation Report* form. Five areas—Personal Characteristics, Teaching High School Students, Providing for Occupational Experience, Advising of the FFA, and Participation in the School—are rated on a 5-point scale ranging from poor to excellent. The form provides for additional comments and an overall evaluation.

The Ohio New-Teacher Program is well received by program participants. It is very focused and expectations are specific. The new teachers receive credit for what they need to do in their first year. Paying tuition and receiving graduate credit is an incentive to do a creditable job. Positive public relations are nurtured with the teacher education staff. Meeting in Saturday workshops is a valuable networking and sharing experience for the participants. The industry tours are professionally beneficial to new teachers who may have had little contact with industries. The program is beneficial to the institution in terms

of FTEs and course fees. The greatest benefit of course, is to the teachers, who are carefully guided through the components of a vocational agricultural program.

The program requires a great deal of organization and time on the part of the coordinating teacher educator. The course fee provides an option for those teachers who do not want to commit to completing assignments specified for graduate credit. The benefits to those who lack commitment to the full program is debatable. Having workshops on Saturday is both a positive and negative aspect of the program. Some teachers would rather give up one Saturday a quarter for a course rather than attend regular class sessions. Others dislike giving up any Saturday, especially as more states move to Saturday inservice and FFA activities. In a cost-effective era, paying fees or tuition for services makes sense; yet individuals criticize the profession for not providing service, in this case beginning-teacher assistance, without a fee.

Considering the advantages and disadvantages, the model is a strong, desirable one. The basic notion of providing continued support to new teachers in vocational agriculture is well supported.

The Ohio Industry Teacher Program

Clientele Served

Teachers who do not graduate from an agricultural teacher education program but who are beginning careers as vocational agriculture teachers participate in a separate industry certification program. It is the philosophy of the institution based on service to the teachers that major preparation differences exist between teachers in these two groups. Therefore, the teachers have different needs as they make their transitions to the classroom and should have different programs to assist them in their first year.

Purpose of the Program

The purpose of the program is to provide instruction for teachers from industry that focuses on the science of teaching and prepares the teachers for the agricultural education classroom. As stated earlier, the strength of these teachers is in their technical background and work experience. They are eligible to participate in this program only if they are from areas where there is a shortage of university certified teachers such as in Trade and Industrial Education, Agricultural Mechanics, Food Service, and Home Economics.

Program Administration and Components

Dr. R. Kirby Barrick coordinates the industry teacher program at Ohio State University. The program is administered through the five Regional Vocational Education Personnel Development Centers. Two centers are directed by Ohio State University, and one each by Bowling Green University, Kent State University, and Ohio University. In addition to the new-teacher program, the centers also support inservice for all vocational personnel and research.

The program enables participants to earn an initial four-year certificate, the same certificate held by teacher education graduates. The industry teachers have three to four years to complete the thirty-six quarter credit-hour program. Program participants are not restricted to agricultural education. The teachers complete activities which reflect twenty-nine professional education competencies. The required competencies are as follows:

1. Motivating students.
2. Managing student learning in the classroom.
3. Managing student behavior (discipline).
4. Working with handicapped and disadvantaged students.
5. Understanding teacher liability.
6. Understanding the principles of teaching and learning.
7. Managing student learning in the lab.
8. Planning instructional strategies.
9. Preparing evaluation strategies.
10. Using advisory committees.
11. Writing duties and tasks.
12. Preparing lesson plans.
13. Writing behavioral objectives.
14. Writing course outlines.
15. Preparing and using instructional materials.
16. Advising the vocational student organization.
17. Teaching safety.
18. Dealing with individual differences.
19. Understanding the role of an instructor.
20. Working within the school system.
21. Employing public relations principles.
22. Being aware of sex equity.
23. Becoming involved in professional organizations.
24. Obtaining a teaching certificate.
25. Practicing teaching.
26. Communicating effectively.
27. Developing positive human relations.
28. Planning content for applied math, communications, and safety skills.
29. Teaching students employability skills.

During the first year, the teachers attend a four-week workshop. By completing the workshop, they earn eight quarter hours of credit. The workshop focuses on preparing

the individual to teach. While a great deal of the information is generic in nature, some is also program specific. To meet this need, participants divide into program area groups such as agricultural education, home economics, and trade and industry to discuss the specific teaching needs of their areas. Teacher educators conduct fifty-four hours of on-site supervisory visits and seminar programs during the first year of teaching. Teachers earn nine quarter hours of credit for the visits and seminars.

The second year of the program includes a two-week workshop for which participants earn four quarter hours of credit. Teacher educators continue supervisory visits in the second year, spending twenty-seven clock hours with the teachers. The teachers may use the third year to complete six quarter hours of additional courses so that their program includes completion of thirty-six quarter credit hours. Courses are in areas specific to their programs and reflective of their instructional needs.

Evaluation of the Program

Teaching activities are evaluated by the visiting supervisors throughout the program. Participants have the opportunity to also evaluate the program during the various workshops. This program differs slightly from the others as a result of being administered through the regional centers. A report of research conducted is also submitted.

The program is well organized and serves teachers with needs different from the traditional teacher education graduate. In theory, the program is not an expense to the institution since it is funded through the regional centers. However, not all costs are met by the contract, so the universities do contribute to the shortfall. It is a program which focuses on teacher preparation and continued support. Crossover of vocational program areas is encouraged and contributes to the sharing of mutual concerns of beginning teachers from industry. Finally, the program is one of the few that recognizes and financially supports research in teacher education.

A major concern for the program is in establishing a climate of trust and verbalization of expectations between those who certify teachers in the state department of education and the university supervisors. It is sometimes difficult to understand the operations of this model that is administered from a regional center rather than from the university or state department of education. The program has opened the door for enhancing this relationship. The problems are minimal in comparison to what is accomplished. The success of the program is measured by the assistance provided to teachers who in many states struggle with the basics of teaching. The individual needs of these teachers from industry are considered and met by the program.

Summary

Teacher program models from two states have been presented here. One model operates as a service activity and is financially dependent on the State Department of Public Instruction as the funding agency. The other model represents a program through which beginning teachers can receive course credit and is supported through the university's budget or through regional center funding. Both meet the needs of the beginning teachers in their respective states. Both are very well organized and focused.

The time has passed when teacher educators could simply drop by and visit new teachers. Teachers need and want positive, constructive assistance as they make the challenging transition into the vocational agriculture classroom.

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STRUCTURING THE INDUCTION PROCESS FOR BEGINNING VOCATIONAL TEACHERS

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The title of this monograph, *On Becoming a Teacher: Vocational Education and the Induction Process*, implies that there is something special about learning to be a teacher. There is a massive literature base about the education and development of teachers. Much of that literature deals with the problems and hazards attendant to the process (Veenman, 1984). The other authors in this monograph have indicated clearly that they believe becoming a vocational teacher is no simple matter.

A craftsman must take materials and tools and then create. A manager must take requirements and people and then solve problems with them. An artist must envision things that do not exist and then make them. A physician must look and question, then use insight to diagnose and prescribe.

But a teacher—a teacher must master all of those abilities. A teacher must have the skill of a craftsman, the organizational skills of a manager, the vision of an artist, and the insight of a physician. Shulman (1987) argues that teaching is probably the most difficult of all professions to master.

This chapter is built upon the theoretical base that is established by the rest of the monograph. With that theoretical base in mind, let us briefly reexamine each of the previous chapters in an attempt to create a single, coherent picture. Then we will propose a structured induction assistance program for beginning vocational teachers.

Becoming a Teacher

The process of becoming a teacher is fraught with obstacles, and it takes place over an extended period of time. It can be visualized as a continuum (see Figure 1), which includes preservice education, induction, and continuing development (Camp, 1988). Of those three phases, the induction process is the focus of the research project on which both this monograph, and the symposium at which the papers were first presented are based.

Figure 1. ***Professional Development in Teaching***

The Induction Process

The induction of a beginning teacher involves an accumulation of many experiences. It includes all of those occurrences in the life of the newcomer that lead from the state of being a novice to being an established teacher. It cannot be defined in terms of a predetermined time period, nor can it be defined as a predetermined set of experiences (Camp & Heath, 1989).

For many teachers, the induction process may be bitter, leading to personal and professional defeat and a premature departure from teaching. For others it may be relatively pleasant, leading to an early feeling of comfort and confidence in teaching. More often it falls somewhere between those two extremes (Moore & Camp, 1979; Varah, Theune, & Parker, 1986; Roper, Hitz, & Brim, 1985).

There has been an increasing interest in the induction process among educational researchers during the 1980s. Waters (1988) cites several major research programs in this area, particularly those conducted by the Educational Testing Service and the Research and Development Center for Teacher Education at the University of Texas at Austin. Unfortunately, none of that research has been specific to vocational teachers. As Gage (1977) found, for research to be optimally effective, it must be discipline-specific. Thus there is a clear and pressing need to examine the induction process, problems, and needs of beginning vocational teachers (Waters, 1988).

Mentoring

A comprehensive induction assistance program should include many components. One component on which there is almost universal agreement is mentoring. The concept of the mentor is not new; from ancient literature to the modern business world, mentoring has been described and widely practiced. In the field of education, however, formalized mentoring systems are a fairly recent development (Johnson, 1988).

There is a vast literature on mentors and mentoring. It is clear that to be optimally valuable to the novice, the mentor must be a supportive, nurturing, guiding person of greater experience. It is also clear that mentoring is not an inherited human ability. Mentors should be trained in their role, and their training must be something more than a three-hour inservice workshop. Learning to be an effective mentor is a demanding task (Johnson, 1988). The role of mentor can be invaluable for the novice (Hoffman, Edwards, O'Neal, Barnes, & Paulissen, 1986; Varah, Theune, & Parker, 1986), but it can be a rewarding and productive experience for the mentor as well (Thies-Sprinthall & Sprinthall, 1987; Hawk, 1986-87).

Teacher Certification Patterns

Iverson, Trussell, & Walker (1988) found that certification requirements vary greatly from state to state. They also concluded that existing certification patterns are rapidly changing. They divide certification programs for beginning teachers into two categories: traditional and nontraditional.

Traditional certification consists of college-based teacher education programs blending the study of general college subjects and emphasizing technical subject-matter content with the study of pedagogy and related material. This approach culminates in a period of supervised classroom experience (Iverson, Trussell, & Walker, 1988).

Nontraditional certification approaches involve beginning teachers with only subject-matter or technical knowledge. The acquisition of teaching skills is initiated only after the beginner is hired—frequently on the job. The trade and industrial model, in which teachers are certified to teach based on occupational experience, is an excellent example of such an approach (Iverson, Trussell, & Walker, 1988).

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Non-Teacher Education Graduates

Scott (1988) discusses the problems and induction needs of this unique group of beginning teachers. Since the Smith-Hughes Act of 1917, trades and industrial (T&I) teachers have entered the classroom by a route different from the conventional teacher education model. Traditionally, most T&I teachers do not have college degrees. They enter teaching with little or no preservice teacher education. They are experienced workers or craftspersons, but they have no pedagogical training prior to the beginning of induction (Scott, 1988). The process by which such beginning teachers are inducted into the profession must be different from that of teacher education graduates with pedagogical training and student teaching experiences (Scott, 1988; Malpiedi, 1988). Such teachers deal with a different body of students, in a different kind of facility, with different educational objectives.

In many states, pedagogy and training in program and classroom management are offered as a part of the induction process (Scott, 1988). Thus, interestingly enough, it would appear that the only large-scale and widespread induction assistance program in public education for many years has been the how-to-teach workshops for vocational teachers.

Another group of teachers with a somewhat analogous situation is those with alternative certification. In a growing number of states, certification requirements are being modified to allow for beginning teachers without teacher education backgrounds (Wise, 1988). In the sense that they must learn pedagogy on the job, these teachers have a different induction process from that of most other beginning teachers.

Teacher Education Graduates

Heath, Camp, and Barber (1988) report the findings of one part of an ongoing study of the induction process and the problems of beginning vocational teachers. In contrast to the teachers discussed in Scott's chapter (1988), their findings relate to vocational education teachers entering the profession through the traditional (Iverson, Trussell, & Walker, 1988) certification route, that is, teacher education.

The Heath, Camp, and Barber (1988) study reports that some of the problems identified by beginning vocational teachers are similar to those identified for all beginning teachers (Veenman, 1984). Inability to motivate students adequately and lack of a complete

orientation by the local school system are examples. On the other hand, Heath, Camp, and Barber also report that beginning vocational teachers have many unique problems. Managing laboratories, collecting and reporting vocational data, advising cocurricular vocational youth organizations, and perceiving a lack of understanding among other members of the faculty and counseling staff are problems particularly felt by beginning vocational teachers.

First-Year Teacher Programs

There are numerous examples of induction assistance programs for beginning vocational teachers. Unfortunately, not much appears in the recent literature to describe them. Malpiedi (1988) has provided an outline of the assistance programs for first-year teachers of agriculture in North Carolina and Ohio. Both programs are university-based service activities of the agricultural education faculties at North Carolina State University and Ohio State University, respectively. Both programs are aimed at helping the bachelor's or master's graduate in agricultural education make the transition from student to teacher during the first year on the job.

In addition, the Ohio program has a component (analogous to the T&I model) directed specifically at industry-certified teachers of agriculture. The Ohio program also includes an industry-based component for technical updating/training of the teachers (Malpiedi, 1988).

A Structured Approach

The transition from novice to established teacher is too critical to be left to chance as it has been in the past. As the teacher shortage develops over the next decade (Wise, 1988), and as demands for reform and improvement in education continue, we need to find a productive and effective way to assist the beginning teacher in making a smooth transition. What is needed is a structured, well-conceived approach to induction assistance, based on research, educational theory, experience, and the best thinking that we can bring to bear on the problem.

A Collaborative Approach

To be successful, any induction assistance program must not only involve the local school officials, it must be accepted and supported by them. After all, education is fundamentally a local responsibility in this country. Of just as much importance, the program must have the acceptance and support of the local teachers, upon whom such a program relies for much of the direct assistance activities.

The state department of education must also be involved. In every state there is a central body with overall responsibility for setting broad direction and for coordinating the educational enterprise for the state. Certification is controlled at the state level, and, increasingly, beginning-teacher assessment is being managed by state departments of education as the states' governors find education a politically important entity.

The university must be involved as well. It is from the university teacher education faculty that the research base upon which the program is built must come. Education faculty members at the university level can take a broader perspective of the induction process. They can examine alternative solutions being tried in schools across the state and nation and help evaluate these solutions for possible implementation in other schools.

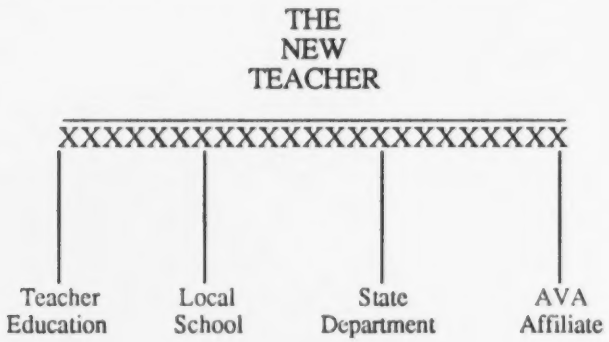
There is at least one more group that should be involved. Because vocational education consists of a set of highly specialized programs at the local level, beginning vocational teachers often find themselves without potential mentors, or even role models, with the same subject-matter orientation. That is particularly true in small school systems. Even so, we know it is important that the novice have someone in the same subject-matter field to go to for subject-specific or program-specific assistance (Johnson, 1988).

Thus, the final party in a comprehensive induction assistance program should be one that can provide such specific assistance. The American Vocational Association (AVA), through its state associations—and in particular, through its affiliated organizations—should accept responsibility for assisting in the induction of new teachers into the profession. If the AVA is to be a professional organization that works for the improvement of the profession, what better way than by improving the process by which new teachers are brought into the nation's vocational classrooms? As an example, the Virginia Vocational Agriculture Teachers' Association, under the leadership of the Virginia Vocational Association, should become involved in a collaborative induction assistance program for beginning agriculture teachers in the schools of the commonwealth.

There are four logical parties to a comprehensive induction assistance program (see Figure 2). Officials of the state department of education should provide direction, teacher education faculty members should provide a theoretical and research base, local school

administrators and teachers should provide support and direct assistance on a day-to-day basis, and members of the profession through professional organizations should provide subject-specific and program-specific assistance.

Figure 2. ***Collaboration in Vocational Teacher Induction***



Professional Development Centers

In conjunction with the preservice and inservice assistance programs in the vocational teacher education institutions, a series of Professional Development Centers (PDCs) should be established in selected school systems (see Figure 3). Each center would be operated by a Professional Development Center Coordinator (PDCC) with joint faculty status in both the university and the local school (see Figure 4). The position would be full-time and would be funded through a collaborative arrangement among the local school system, the university, and the state department of education. Because the PDCC would be a locally based teacher, he or she would be more readily accepted as a team member by other local teachers and administrators (Hawks, 1988).

Figure 3. *The Professional Development Center (PDC)*

- Selected Schools
- Special Relationship Between School and University
- Full-Time Coordinator
- Joint Funding:
  - University
  - Local School
  - State Department

- Professional Development Stages
  - Preservice
  - Induction
  - Continuing Development

Figure 4. ***The Professional Development Center Coordinator (PDCC)***

- Located in PDC
- Full Time
- Joint Faculty Appointment
  University and School
- Coordinates Field Service Component of the University Preservice
- Trains Mentors
- Organizes and Supervises Induction Assistance Program
  - Mentor
  - Beginning Teacher Seminars
  - University Assistance
  - State Department Assistance
  - Professional Organization Assistance
- Organizes and Assists in Conduct of Continuing Professional Development Program
  - Credit Courses
  - Non-Credit Workshops
  - Local Inservice

Professional Development Local Coordinators

Clearly, not all vocational teachers will be trained and inducted into the profession in large school systems with Professional Development Center Coordinators to assist them. Yet provision should be made for the induction support and assistance of those beginning teachers too. It should be possible for any local school system that employs vocational teachers to assign, with appropriate released time, an experienced vocational teacher to assist in the organized induction of novices during the critical first years and to coordinate organized professional development activities on an ongoing basis to teachers throughout their careers. With somewhat analogous, albeit less extensive, responsibilities to the PDCC, this experienced teacher would carry the title of Professional Development Local Coordinator (PDLC). This individual would play the same role as the PDCC, except on a

smaller scale, and would have a part-time assignment as PDLC (as opposed to the full-time PDCC). He or she would be an adjunct faculty member of the cooperating teacher education faculty (see Figure 5).

Figure 5. ***Professional Development Local Coordinator (PLDC)***

- Located in Other Schools
- Some Release Time
- Joint Faculty Appointment
  University and School
- Trains Mentors
- Organizes and Supervises Induction Assistance Program
  - Mentor
  - Beginning Teacher Seminars
  - University Assistance
  - State Department Assistance
  - Professional Organization Assistance
- Organizes and Assists in Conduct of Continuing Professional Development Program
  - Credit Courses
  - Non-Credit Workshops
  - Local Inservice

Training the PDCC and PDLC

Regardless of the proportion of his or her time assigned to the task, the coordinator would need to be trained in the induction assistance role. Skills in the clinical assistance of novice teachers, reflective self-critique, mentoring, and staff development are not inherited human capabilities. All of the coordinators would receive extensive training in those processes through the teacher education program at the college of education prior to assuming responsibility for serving in that capacity.

In essence, the PDCC or PDLC would become a locally based teacher educator. As such, the coordinator should receive an adjunct appointment to the teacher education faculty as a clinical assistant. Because of the differing amounts of released time and resources available, the PDLCs would not be able to collaborate as closely with the teacher education program at the university as the PDCC. The responsibilities of the PDCC would include working with preservice teacher education students, whereas the PDLC's responsibilities

would not. Nevertheless, the teacher education faculty should accept responsibility for working with all client school system PDCCs and PDLCs to the extent practicable.

The Coordinator Role

The PDCC would have extensive involvement with the field experience component of the teacher education preservice program, which as a result could become more field-based and less campus-based. In addition, the PDCC would have responsibility for the organization and conduct of an induction assistance program for beginning vocational teachers. Another area of responsibility would be the continuing professional development of more experienced vocational teachers in the local school system.

The PDCC would organize and coordinate the local induction support program for his or her school system. In this role, the PDCC would be responsible for training experienced and successful teachers to serve as mentors. The PDCC would then facilitate the matching and cooperation of mentors and novices. In addition, the PDCC would conduct ongoing professional induction support and assistance seminars for the novice teachers.

Because professional development is a continuing process that begins during preservice, encompasses the induction process, and extends throughout the career of the teacher, the PDCC would also be responsible for organizing and supervising the continuing professional development activities of vocational teachers of the school system. In this role, the PDCC would organize both university-credit graduate courses and non-credit workshops for local teachers. It is not expected that the PDCC would necessarily teach such courses, but, rather, would arrange for regular university faculty or other appropriate resource persons to teach courses in their areas of expertise with scheduling based on the actual needs of the local teachers and schools. As the university representative, the PDCC would be in a unique position to facilitate collaboration between university faculty and local school faculty.

Role of Professional Organization

Members of the respective teacher professional organizations have the subject-specific and program expertise and experiences that the beginning teacher of agriculture, business, home economics, marketing, trade and industrial education, or technology lacks and needs. Under the leadership of the state vocational organization, members of the respective affiliate vocational teacher organizations should provide that expertise to beginning teachers.

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As an example, geographic area meetings of beginning marketing teachers and representatives of the state association of marketing education teachers could be held two to three times during the year. Neither the beginning teachers nor the experienced teacher would be remunerated for their time, but travel expenses could be reimbursed. State plans for vocational education would have to contain provisions for such expenditures. Teacher educators, state department of education personnel, PDCCs and PDLCs might become involved in the sessions by invitation, but actual responsibility for the instruction would be in the hands of the representatives of the professional organizations.

Summary and Conclusions

Summary

Teaching is one of the most difficult of all professions to master. Yet those who are responsible for the education, induction, and continued professional development of teachers (i.e., teacher educators and state and local education leaders) have generally done little to assist beginning teachers to negotiate successfully their transition into the profession. Traditionally, very little has been done after graduation by teacher education programs to provide positive support for novice teachers. That situation has been further complicated for beginning vocational teachers who enter the classroom directly from industry, without teacher education. With the expansion of alternative certification programs in the last several years, the number of novice teachers facing similar problems has increased.

Organized induction programs can help to make the transition into full-time teaching less traumatic for the beginning teacher. They can also help in the retention of promising beginning teachers, many of whom leave teaching in frustration during their first year or so on the job. Not only can induction support and assistance programs be valuable to the novice teachers themselves, but their students will benefit from better instruction, and the experienced teachers who provide the assistance will gain in professional stature, self-confidence, and morale.

One mechanism that would be useful in structuring an induction assistance program would be the development of a series of professional development programs in local schools. In selected school systems, and in collaboration with teacher education institutions, that could take the form of Professional Development Centers managed and operated by full-time teacher educators in residence. These Professional Development Center Coordinators would have responsibilities in the field experience component of the teacher edu-

cation program, and they would also be responsible for organizing and managing an induction assistance and continuing professional development program for local teachers. In other school systems, the transition assistance mechanism would take the form of a Professional Development Local Coordinator, whose responsibilities would include only the induction and continuing professional development program.

Four distinct groups would be involved in a collaborative professional development system, with particular emphasis on induction assistance for beginning vocational teachers. The local school system would provide the facilities and part of the expense involved, along with much of the actual daily contact with the beginning teachers. The state department of education would provide leadership in initiating the program and in providing part of the travel (and perhaps other) expenses. The teacher education program at the cooperating university would provide the training for participants and the expertise in coordinating the program. Finally, the professional teacher organizations would provide subject-specific expertise and program-specific experience.

Conclusions

Until we put in place an improved mechanism for the induction of beginning vocational teachers and their continuing professional development, the vision of an empowered professional teaching force will remain an illusion. Clearly an improved, structured induction program alone will not make that vision a reality, but the vision cannot be realized without it. In the language of logic, an effective induction assistance program is a necessary but not a sufficient precursor of a more professionalized teaching force.

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